

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO**

FRIENDS OF THE FLORIDAS; NEW
MEXICO WILDERNESS ALLIANCE;
WILDEARTH GUARDIANS; GILA
RESOURCES INFORMATION PROJECT and
AMIGOS BRAVOS,

Plaintiffs,

vs.

No. CIV 20-0924 JB/GBW

UNITED STATES BUREAU OF LAND
MANAGEMENT; SCOTT COOKE,¹ in his
official capacity as District Manager of the
BLM Las Cruces District Office, and DAVID
WALLACE, in his official capacity as Assistant
District Manager of the BLM Las Cruces
District Office,

Defendants.

AMERICAN MAGNESIUM, LLC

Defendant-Intervenor.

MEMORANDUM OPINION AND ORDER

THIS MATTER comes before the Court on the Plaintiffs’ Opening Brief on the Merits, filed February 21, 2023 (Doc. 47)(“Plaintiffs’ Brief”). The Court held a hearing on July 12, 2023. See Clerk’s Minutes at 1, filed July 12, 2023 (Doc. 54). The primary issues are: (i) whether Plaintiffs Friends of the Floridas, New Mexico Wilderness Alliance, WildEarth Guardians, Gila Resources Information Project, and Amigos Bravos (collectively, “Plaintiffs”), have standing to pursue their claims under the Administrative Procedure Act, 5 U.S.C. §§ 551 to 559, 701 to 706

¹Pursuant to rule 25(d) of the Federal Rules of Civil Procedure, Scott Cooke is automatically substituted for former Defendant William Childress. See Fed. R. Civ. P. 25(d).

(“APA”), National Environmental Policy Act, 42 U.S.C. §§ 4321 to 4370m-11 (“NEPA”), and the Federal Land Policy and Management Act, 43 U.S.C. §§ 1701 to 1787 (“FLPMA”); (ii) whether the Defendants United States Bureau of Land Management (“BLM”), Scott Cooke, and David Wallace violated the NEPA by failing to take the requisite “hard look,” Ctr. for Biological Diversity v. U.S. Dep’t of the Interior, 72 F.4th 1166, 1179 (10th Cir. 2023)(citing Wyoming v. U.S. Dep’t of Agric., 661 F.3d 1209, 1264 (10th Cir. 2011)), at the reasonably foreseeable indirect environmental impacts that arise from a proposed American Magnesium Foothill Dolomite Mine Project in Luna County, New Mexico (“Mining Project”), namely, the ecological impacts from the Mining Project’s off-site processing mill (“Processing Mill”); (iii) whether the BLM violated the NEPA by failing to consider and analyze reasonable alternatives to the Mining Project; (iv) whether the BLM violated the NEPA by failing to analyze adequately the baseline ecological conditions in the Mining Project area, specifically, the baselines conditions related to air quality and migratory bird nesting; (v) whether the BLM violated the FLPMA by approving initial mining exploration and a full mine at the same time; and (vi) whether the BLM violated the FLPMA by approving the Mining Project without knowing certain details regarding the off-site Processing Mill. After reviewing carefully the parties’ arguments, the administrative record, and the relevant law, the Court concludes that: (i) the Plaintiffs have standing to pursue their claims; (ii) the BLM: (a) has taken the NEPA-mandated “hard look” at the reasonably foreseeable air quality impacts from the Processing Mill, (b) has taken the NEPA-mandated “hard look” at the reasonably foreseeable water quantity impacts from the Processing Mill, (c) has not taken the NEPA-mandated “hard look” at the water quality impacts arising from the Processing Mill, and (d) has taken the NEPA-mandated “hard look” at the reasonably foreseeable environmental impacts related to the magnesium ore transportation from the Mining Project site to the Processing Mill;

(iii) the BLM did not violate the NEPA in its discussion of reasonable alternatives, because the BLM adequately considers the alternatives that were reasonable given the project's purposes; (iv) the BLM does not violate the NEPA in its discussion of baseline conditions, because the BLM, in its environmental assessment, provides sufficient information regarding baseline air quality and migratory bird nesting to comply with the NEPA; (v) the BLM does not violate the FLPMA by approving the Mining Project's exploration phase and full mining phase simultaneously, because Defendant-Intervenor American Magnesium LLC's ("American Magnesium") plan of operations involved reasonable and customary sequencing given the specific facts and circumstances related to the Mining Project, and that sequencing does not run afoul of the BLM's FLPMA-imposed obligation to prevent unnecessary or undue degradation of the lands; and (vi) the BLM does not violate the FLPMA by approving the Mining Project given the level of detail known about the Processing Mill, because the BLM's FLPMA obligations do not extend to the private land on which the Processing Mill will sit, and, even if they did, the BLM complied with the informational requirements in the relevant regulations. Owing to the nature of the BLM's NEPA violation, the Court -- under the APA remedy analysis that the United States Court of Appeals for the Tenth Circuit mandates, see Diné Citizens Against Ruining Our Env't v. Haaland, 59 F.4th 1016, 1048 (10th Cir. 2023) -- remands this case to the BLM, but does not order vacatur.

FACTUAL BACKGROUND

The Court divides its factual background into two sections. First, the Court discusses the initial proposal for a mining project on BLM-managed lands near Deming, New Mexico, and the BLM's environmental assessment of the Mining Project's ecological impacts. After outlining the Mining Project, the Court introduces the parties.

1. The Initial Proposals, Relevant Geography, the Environmental Assessment, and Later Proposals.

The Court first describes the initial proposal for the Mining Project, which seeks to mine magnesium ore on BLM-managed lands near Deming, New Mexico. Next, the Court describes a 2018 change in BLM policy, before outlining the BLM’s environmental assessment of the proposed mining project’s environmental impacts and the BLM’s decision that the mining project would not significantly affect the environment. Last, the Court describes later factual developments related to a modified proposal related to the mining project.

a. The Initial Proposals and Relevant Geography.

On March 1, 2017, American Magnesium submitted a Plan of Operations (“PO”) for proposed “dolomite^[2] mining near Deming, New Mexico.” Letter from Vickie Maranville to Doug Haywood, Re: Submittal of Plan of Operations for American Magnesium Proposed Mining Operation Near Deming, New Mexico (dated March 1, 2017)(AR 0000004162). See Plan of Operations for Magnesium Mining, Deming, New Mexico at i (AR 0000004165)(dated March 2017)(AR 0000004164-0000004282)(“Initial PO”). American Magnesium submitted the Initial PO to the BLM’s Las Cruces Office and to the relevant State-level regulatory agencies. Initial PO at i (AR 0000004165). The Initial PO represents that American Magnesium will administer the American Magnesium Resource Verification and Mining Project (“Mining Project”), and locate the Mining Project on BLM land “in part or all of Section 26 & 27, Township 25 South, Range 8 West, NMPM, in the Little Florida Mountains Mining District, Luna County, New Mexico.”

²Dolomite is “an anhydrous carbonate mineral composed of calcium magnesium carbonate, ideally $\text{CaMg}(\text{CO}_3)_2$. The term is also used for a sedimentary carbonate rock composed mostly of the mineral dolomite (see Dolomite (rock)).” Dolomite (mineral), [https://en.wikipedia.org/wiki/Dolomite_\(mineral\)](https://en.wikipedia.org/wiki/Dolomite_(mineral)) (last visited August 1, 2024).

Initial PO at i (AR 0000004165). The Initial PO states that the Project’s area will “create, over the life of the project, a total of 44 acres of surface disturbance,” but that “[a]t any given time during the project, . . . there will be no more than 40 un-reclaimed acres of disturbance.” Initial PO at i (AR 0000004165).

After a series of revisions to the Initial PO, and “comments received during the preparation of the Environmental Assessment,^[3]” American Magnesium submitted its final PO in September, 2020. See Letter from Carol Ness Brewka to Bill Childress and Holland Shepherd, Re: Permit Tracking No. LU035MN, Submittal of American Magnesium LLC’s Plan of Operations, Foothill Dolomite Mine (Revision 5) at 1 (dated September 1, 2020)(AR 0000005631); Plan of Operations, Foothill Dolomite Mine, Deming, New Mexico (dated August 27, 2020 (Revision 5))(AR 0000005632-0000005731)(“Final PO”).⁴ The last PO available in the Administrative Record that

³As the United States Court of Appeals for the Tenth circuit has noted:

NEPA has been implemented in part by regulations of the Council on Environmental Quality. *See* 40 C.F.R. § 1500 et seq. Under the regulations, an agency contemplating action may be required to prepare an “environmental assessment” (or “EA”) containing a concise discussion of environmental considerations and providing a basis for the agency to determine whether the action is a major one. If the agency finds that the action will not significantly affect the human environment (and is thus not a major action), it makes a “Finding of No Significant Impact” (or “FONSI”). If it finds the action will significantly affect the environment, it is then required to prepare a more extensive analysis in the form of an “environmental impact statement” (or “EIS”).

Utah Shared Access All. v. U.S. Forest Serv., 288 F.3d 1205, 1207 (10th Cir. 2002)(citing Airport Neighbors All., Inc. v. United States, 90 F.3d 426, 429 (10th Cir. 1996)).

⁴The July 2020 Environmental Assessment, discussed *infra*, purports to rely on a PO dated April 9, 2019. See American Magnesium Foothill Dolomite Mine Project Environmental Assessment at 1, 73 (AR 000000017, 0000000089)(dated July 2020)(AR 0000000014-0000000099)(“EA”). The Court finds no PO dated April 9, 2019, in the Administrative Record.

predates the EA is a revision dated September 2018. See Plan of Operations for Dolomite Mining, Deming, New Mexico (dated March 2017 (Revised September 2018))(AR 0000004164-0000004282)(“September 2018 PO”).

The Project is located approximately twelve miles south of Deming, New Mexico. See September 2018 PO at ii (AR 0000004998). See Figure 1, infra. Of the 40-acre-Project area, “approximately 30 acres would consist of surface mining, one laydown yard for a mobile office and equipment, and a reclamation reference area.” EA at 1 (AR 0000000017). See Figure 2, infra.

The Administrative Record contains a Letter that refers to an April, 2019, PO. See Letter from Carol Ness Brewka to Bill Childress and Holland Shepherd, Re: Permit Tracking No. LU035MN, Submittal of American Magnesium LLC’s Plan of Operations, Foothill Dolomite Mine (Revised) at 1 (dated April 9, 2019)(AR 0000005525)(“April 2019 Letter”). The April 2019 Letter states, “[e]nclosed please find . . . two (2) copies of AmMg’s revised PoO.” April 2019 Letter at 1. There is, however, no PO attached.

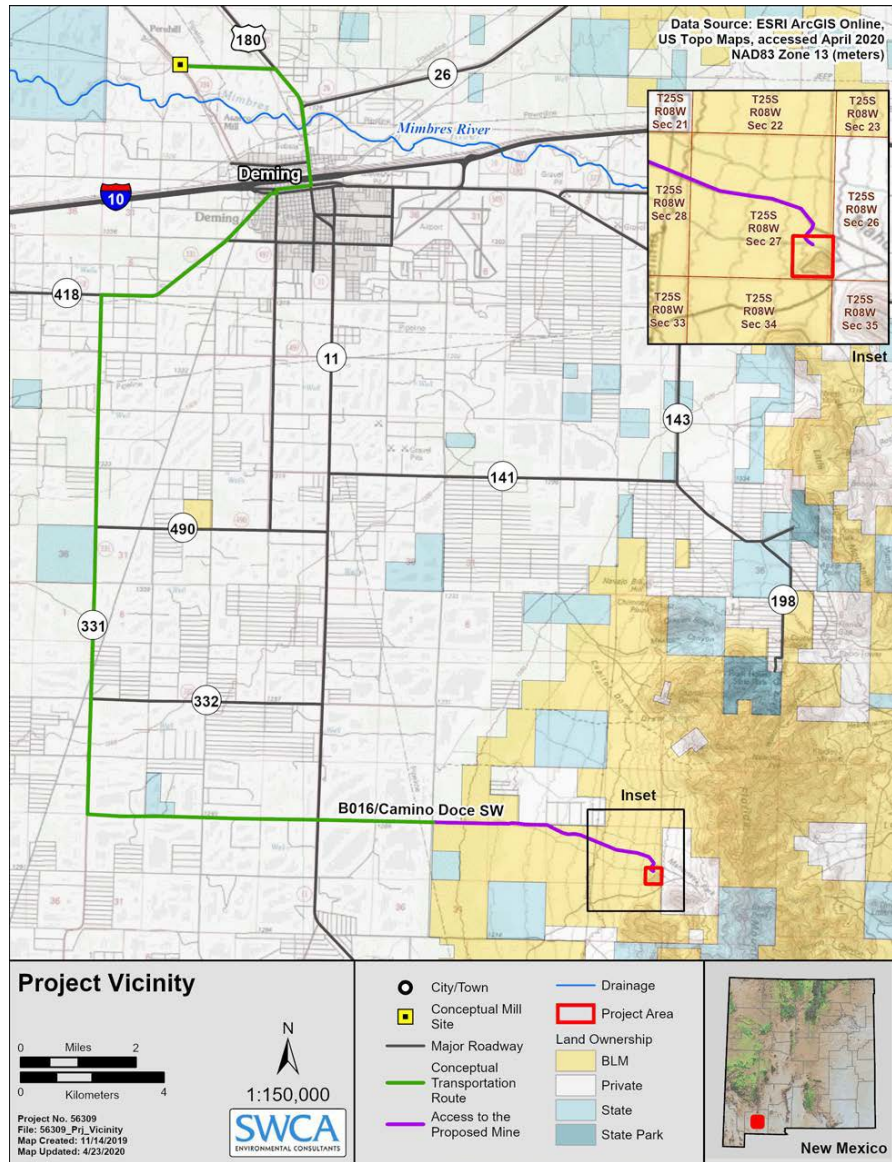


Figure 1: The proposed project vicinity. EA at 2 (AR 0000000018).

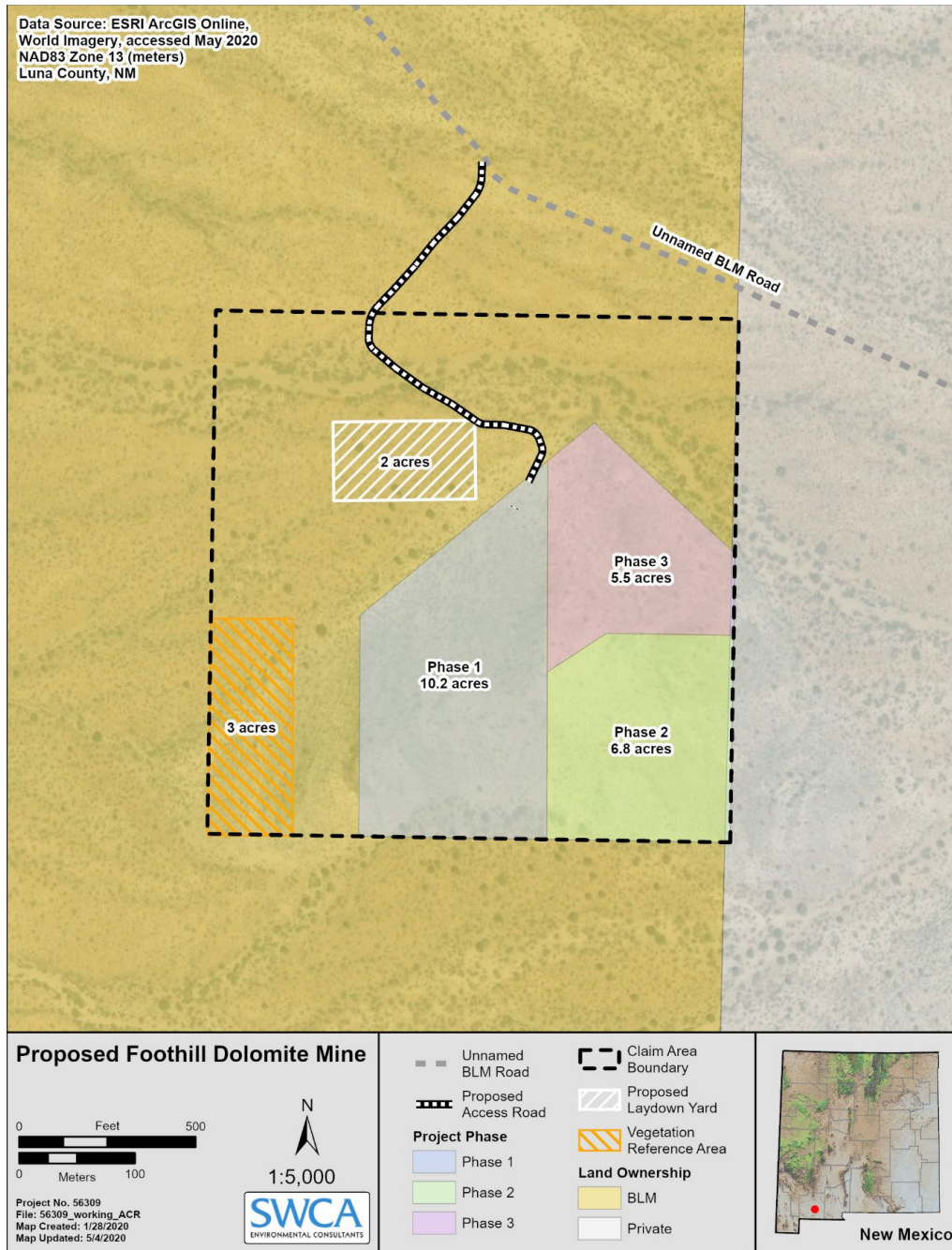


Figure 2: The proposed project area. EA at 3 (AR 0000000019).

Moreover, as noted above, the Project area is located in the Florida Mountains,⁵ near the Florida Mountains Wilderness Study Area.⁶ See Figure 3, infra.

⁵The Florida Mountains are

a small 12-mile (19 km) long, mountain range in New Mexico. The mountains lie in southern Luna County about 15 miles (24 km) southeast of Deming, and 20 miles (32 km) north of the state of Chihuahua, Mexico; the range lies in the north of the Chihuahuan Desert region, and extreme southwestern New Mexico.

Florida Mountains, Wikipedia, https://en.wikipedia.org/wiki/Florida_Mountains (last visited August 1, 2024).

⁶The Florida Mountains Wilderness Study Area is a Secretary of the Interior-designated Wilderness Study Area (“WSA”). According to the Plaintiffs’ Brief, the proposed mining project at issue in this litigation is “adjacent to the . . . Florida Mountains Wilderness Study Area.” Plaintiffs’ Brief at 11. The Administrative Record indicates that the Florida Mountains Wilderness Study Area contains approximately 22,336 acres of land, see American Magnesium Foothill Dolomite Mine Project Environmental Assessment at 63 (AR 000000079)(dated July 2020)(AR 000000014-000000099)(“EA”), and that the proposed mining site is located “approximately 620 feet south of the Florida Mountains WSA boundary,” EA at AR 000000080. WSAs are lands identified as suitable for preservation as wilderness areas. As 43 U.S.C. § 1782(a), part of the FLPMA, states:

Within fifteen years after October 21, 1976, the Secretary shall review those roadless areas of five thousand acres or more and roadless islands of the public lands, identified during the inventory required by section 1711(a) of this title as having wilderness characteristics described in the Wilderness Act of September 3, 1964 (78 Stat. 890; 16 U.S.C. 1131 et seq.) and shall from time to time report to the President his recommendation as to the suitability or nonsuitability of each such area or island for preservation as wilderness: *Provided*, That prior to any recommendations for the designation of an area as wilderness the Secretary shall cause mineral surveys to be conducted by the United States Geological Survey and the United States Bureau of Mines to determine the mineral values, if any, that may be present in such areas: *Provided further*, That the Secretary shall report to the President by July 1, 1980, his recommendations on those areas which the Secretary has prior to November 1, 1975, formally identified as natural or primitive areas. The review required by this subsection shall be conducted in accordance with the procedure specified in section 3(d) of the Wilderness Act.

43 U.S.C. § 1782(a)(emphasis in statute). The relevant definition of “wilderness” is the one that 16 U.S.C. § 1131(c) provides:

A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean . . . an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

16 U.S.C. § 1131(c). “As the name suggests, WSAs (as well as certain wild lands identified prior to the passage of FLPMA) have been subjected to further examination and public comment in order to evaluate their suitability for designation as wilderness.” Norton v. S. Utah Wilderness All., 542 U.S. 55, 59 (2004). While this review is being undertaken, the FLPMA proscribes the manner in which WSAs are to be managed by the Secretary of the Interior:

During the period of review of such areas and until Congress has determined otherwise, the Secretary shall continue to manage such lands according to his authority under this Act and other applicable law in a manner so as not to impair the suitability of such areas for preservation as wilderness, subject, however, to the continuation of existing mining and grazing uses and mineral leasing in the manner and degree in which the same was being conducted on October 21, 1976: *Provided*, That, in managing the public lands the Secretary shall by regulation or otherwise take any action required to prevent unnecessary or undue degradation of the lands and their resources or to afford environmental protection. Unless previously withdrawn from appropriation under the mining laws, such lands shall continue to be subject to such appropriation during the period of review unless withdrawn by the Secretary under the procedures of section 1714 of this title for reasons other than preservation of their wilderness character. Once an area has been designated for preservation as wilderness, the provisions of the Wilderness Act which apply to national forest wilderness areas shall apply with respect to the administration and use of such designated area, including mineral surveys required by section 4(d)(2) of the Wilderness Act, and mineral development, access, exchange of lands, and ingress and egress for mining claimants and occupants.

43 U.S.C. § 1782(c)(emphasis in statute).

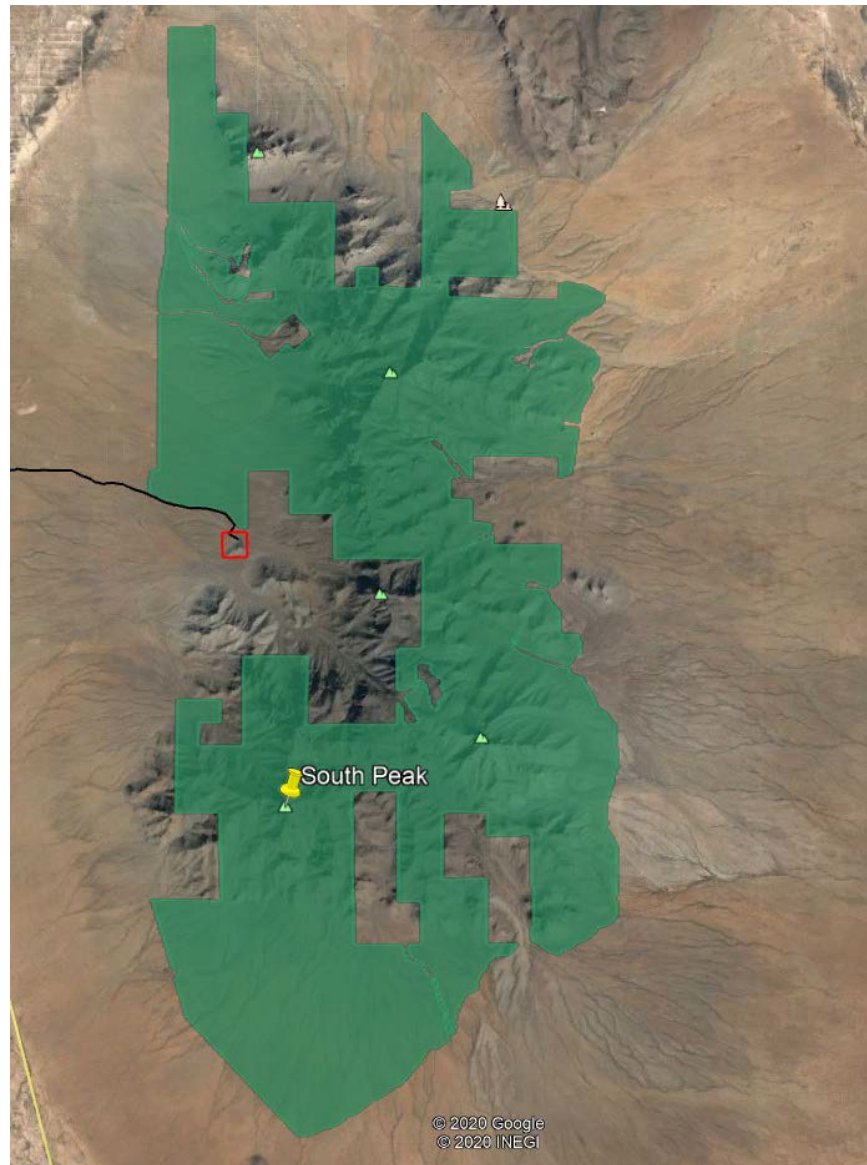


Figure 3: The Project area is outlined in red, and the green area is the Florida Mountains Wilderness Study Area. South Peak, indicated by the yellow pin, is approximately 2.8 miles south-southeast from the Project area.

The September 2018 PO indicates that the Mining Project’s first phase has an exploratory purpose: the initial phase of the mine development will involve drilling to “verify the resource and

confirm the mine PoO.”⁷ September 2018 PO at 7 (AR 0000005010). These verification drill holes, the September 2018 PO states, “will be used as blast holes during active mining.” September 2018 PO at 7 (AR 0000005010). The initial phase involves approximately eighty-six drill holes, see September 2018 PO at 8 (AR 0000005011); Final PO at 13 (AR 0000005657), that will go to approximately 100 feet in depth, see September 2018 PO at 7 (AR 0000005010). This drilling is undertaken to confirm the presence of the intended resources: “Resource verification drilling activities are used to confirm geologic materials observed at the surface and conceptual geologic models.” September 2018 PO at 9 (AR 0000005012).

The expected presence of the targeted Dolomite has some basis. In the September 2018 PO, American Magnesium explains that “Dolomite mineralization in the Florida Mountains was identified by Frank E. Kottowski for the New Mexico Institute of Mining and Technology State Bureau of Mines and Mineral Resources in Circular 47, ‘High-Purity Dolomite Deposits of South-Central New Mexico’ published in August 1957.” September 2018 PO at 40 (AR 0000005043). Moreover, surface-level Dolomite samples in the Mining Project area show color features consistent with “almost pure” Dolomite units. September 2018 PO at 40 (AR 0000005043). The September 2018 PO states that “RPA Mining and Geological Consultants (2014 . . .) completed a Site Visit Report of Florida Mountains, New Mexico claims of American Magnesium LLLP for a rock characterization study of the Dolomite in/near the Project Area and observed these characteristics and color patterns during the site visit.” September 2018 PO at 40 (AR 0000005043). Despite these indications of Dolomite presence in the Mining Project’s area, however, the September 2018 PO concedes:

⁷PoO is the acronym that American Magnesium uses to refer to the Plan of Operations. See September 2018 PO at ii (AR 0000004998).

There is not sufficient information to estimate mineral resources for the deposit at this time in accordance with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resource and Mineral Reserves (2014). The actual thickness of the Dolomite deposit in the Project Area (within AmMg's two mining claims) is unknown at this time. There is no vertical drill hole information for the deposit. All samples are surface chip only and cannot be used to verify the vertical and lateral continuity and grade.

Once resource verification activities begin in Phases 1 and 2 of the mine site, composition and thickness of the geological profile will be confirmed and a cross-section analysis of the geology of the Project Area will be performed and prepared for submission to the BLM. RPA (2014) did a geological cross-section of a hill adjacent to the Project Area and Figure 8 and Figure 9 depict the geological overview of the Project vicinity and geologic cross-section of an adjacent hill to Project Area. Since this location is part of the same formation as the Project Area, its geologic cross-section has been included for informational purposes. An actual geological cross-section of the Project Area can be completed once resource verification drilling has been performed.

September 2018 PO at 42 (AR 0000005045).

Given this lack of "sufficient information to estimate mineral resources for the deposit at this time," September 2018 PO at 42 (AR 0000005045), internal BLM emails indicate that the BLM initially understood an approval for exploration would be more appropriate than approval for a full-scale mining project contingent on exploration.⁸ For example, a June, 2017, email concludes:

[I]t does not appear the BLM can do more at present than evaluate/approve a plan of operations for an exploration drilling project. That is, the company would need to define a resource/reserve and complete the appropriate engineering design and background studies to produce a preliminary economic analysis and at least a pre-feasibility study for the project (open pit mine, conveyor and mill) before having the information necessary for a plan of operations involving the quarry that the

⁸Although these emails are not part of the Administrative Record, the Defendants disclosed them to the Plaintiffs, and, pursuant to the Court's February 6, 2023, Order, the Plaintiffs may rely on these emails to support their arguments on the merits. See Order ¶ 7 at 2, filed February 6, 2023 (Doc. 46)("For documents that were disclosed to the parties but not supplemented to the Administrative Record, any party may rely on and include those documents in support of their merits briefing on an extra-record basis.").

BLM could evaluate/approve. For the company to do otherwise would not appear to be a use reasonably incident to a mining claim per 30 USC 612(a).

Email from Kenneth Gardner, cc'd Anthony Bates, Leighandra Neeven, Ida Viarreal, William Auby, Re: Foothills Dolomite quarry (magnesium project); status at 4 (dated June 27, 2017), filed February 21, 2023 (Doc. 47-7). A response to this concern questioned "the appropriateness of a mine/mill before exploration." Email from Kenneth Gardner to Leighandra Neeven and William Auby, cc'd Adam Merrill, Re: Foothills Dolomite quarry (magnesium project); status at 2 (dated June 28, 2017), filed February 21, 2023 (Doc. 47-8). Even the Final PO, issued after the EA, contains an implicit concession that a successful exploration is a necessary prerequisite to the Mining Project: "If mining operations do not begin within 1 year of the end of verification drilling, AmMg will reclaim the disturbances related to the verification drilling program." Final PO at 13 (AR 0000005667).

The September 2018 PO also discusses access to the Mining Project area, and states that the Mining Project will require "expanding, improving, and maintaining one BLM road and constructing and maintaining a very short new road from the BLM road to the mine site in order to access the proposed mining site and to transport extracted ore to a manufacturing facility." September 2018 PO at 13 (AR 0000005016). This statement is the September 2018 PO's first mention of a manufacturing facility affiliated with the Mining Project -- the Processing Mill. The September 2018 PO then states that "[t]he manufacturing facility, which is not intended to be part of this PoO, is currently planned to be located [in] the Peru Industrial Park in Deming, New Mexico, though the site of the manufacturing facility has not been confirmed." September 2018 PO at 13 (AR 0000005016). Although "not intended to be part" of the September 2018 PO, the Processing Mill plays an indispensable role in the Mining Project:

AmMg, itself or through an affiliate, expects to construct a manufacturing facility within the City of Deming's Peru Industrial Park to produce magnesium and magnesium products from the magnesium-rich Dolomite ore that will be mined and transported from the mine operations that are the primary subject of its PoO application. This is preferred over the alternative of shipping the ore to an out-of-state or out-of-country magnesium facility for processing and will create local jobs and economic development within an already established industrial park that is appropriately zoned and already supplied with useable infrastructure and space needs to accommodate the type of facility that is contemplated for processing the Dolomite ore. Based on available information regarding the resource, the estimated duration of mining operations is 30 years.

September 2018 PO at 13 (AR 0000005016). Further, in a biological field survey attached as an appendix to the September 2018 PO, Mark Daniels, a Senior Ecologist/Environmental Engineer with EnviroSystems Management, Inc., states that, after extraction, "[t]he exceptionally pure dolomite would be mined in a quarry, trucked or conveyed via conveyor belt to a processing facility at Peru Mill Industrial Park in Deming, and shipped via rail to market." Technical Memorandum, from Mark Daniels to David Tognoni, Re: Biological Resources Evaluation of Proposed Mag Hill Dolomite Mine South of Deming, Luna County, New Mexico at 1 (AR 0000005161)(dated August 10, 2016).

Despite the importance of this off-site Processing Mill to the Mining Project, in the September 2018 PO, American Magnesium offers no details (beyond the above-quoted material) regarding the Processing Mill's specifics. The Administrative Record indicates that this lacuna was concerning to BLM in its review of American Magnesium's Initial PO. In a letter dated from May 12, 2017, BLM requests that, "in order for the plan of operations to be complete," American Magnesium needs to provide BLM with a "map" of the Processing Mill's proposed location "along with entire proposed route from the mine site to the Peru Industrial Park." Letter from Bill Childress to David Tognoni, No Subject at 2 (AR 0000004307)(dated May 12, 2017)(AR 0000004306-0000004308)("May 2017 Letter"). The May 2017 Letter also requests information

from American Magnesium regarding “the process(s) [sic] used to extract magnesium from the dolomite,” and also to identify “[w]hat type products [sic] and wastes will come from the process(s) [sic],” and where that waste will be stored. May 2017 Letter at 2. In a letter sent in December, 2017, the BLM followed up on these points, stating that the PO indicates that “the Peru Industrial Site might be the location for ore processing,” but that, “[b]efore the BLM can issue a decision on the Plan, a definitive location must be determined in order for the BLM to complete a National Environmental Policy Act analysis on the Plan.” See Letter from Bill Childress to David Tognoni, No Subject ¶ 11, at 2 (AR 0000004580)(dated December 8, 2017)(AR 0000004579-0000004584)(“December 2017 Letter”). The December 2017 Letter also states that, although the BLM had requested a report on how the ore from the proposed mine would be processed, “[t]his report has not been provided to the BLM,” and that “[t]he BLM cannot determine if your Plan will cause unnecessary and undue degradation to public land without information about how the ore will be processed.” December 2017 Letter ¶ 12, at 2 (AR 0000004580). Moreover, several internal BLM emails indicate that the BLM believed the lack of details regarding the Processing Mill and the processing of the minerals more broadly is an issue for NEPA purposes.⁹ See Email from Kenneth Gardner, cc’d Anthony Bates, Leighandra Neeven, Ida Viarreal, William Auby, Re: Foothills Dolomite quarry (magnesium project); status (dated June 27, 2017), filed February 21, 2023 (Doc. 47-7)(“Note that the BLM would need certain information for the operations on non-

⁹As noted above, although these emails are not part of the Administrative Record, the Defendants disclosed them to the Plaintiffs, and pursuant to the Court’s February 6, 2023, Order, the Plaintiffs may rely on these emails to support their arguments on the merits. See Order ¶ 7 at 2, filed February 6, 2023 (Doc. 46)(“For documents that were disclosed to the parties but not supplemented to the Administrative Record, any party may rely on and include those documents in support of their merits briefing on an extra-record basis.”).

Federal land to complete the required NEPA analysis for the project. Instead, the plan outlines a conceptual exploration drilling project and quarry for dolomite extraction on Federal land.”); Email from Kenneth Gardner to Leighandra Neeven and William Auby, cc’d Adam Merrill, Re: Foothills Dolomite quarry (magnesium project); status (dated June 28, 2017), filed February 21, 2023 (Doc. 47-8)(“I believe we all agree -- a plan highlighting some vague exploration drilling but with the goal of obtaining approval for a quarry based on the concept of a quarry and with no consideration of the conveyor and magnesium complex.”); Email from Kenneth Gardner to Allan Young, cc’d Leighandra Neeven and William Auby, Re: Foothills Dolomite quarry/magnesium project (dated June 29, 2017), filed February 21, 2023 (Doc. 47-9)(“The company has submitted a vague plan of operations to the BLM for exploration drilling and development of a 40 acre quarry. The plan also has no details about the conveyor and magnesium complex. As the plan is incomplete, the BLM has requested additional information.”); Email from Kenneth Gardner to William Auby, cc’d Leighandra Neeven and, Re: Foothills Dolomite quarry/magnesium project, update (dated July 17, 2017), filed February 21, 2023 (Doc. 47-10)(“In the event of a plan of operations for magnesium production, the BLM should perform a claim validity examination and would require detailed information about the quarry, conveyor system, and magnesium processing facility for both the claim validity examination, NEPA analysis, and required consultation.”).

The issues related to the Processing Mill remained central to the BLM’s discussion of American Magnesium’s Mining Project proposal. In an August, 2019, internal Information/Briefing Memorandum for the New Mexico State Director of the BLM, the BLM identifies the “major issues” with the Mining Project as “[m]aterial transportation, mill site location and processing.” Information/Briefing Memorandum for the New Mexico State Director, Bureau of Land Management, from Bill Childress, Re: American Magnesium Foothills Dolomite

Mine at 3 (dated August 8, 2019), filed February 21, 2023 (Doc. 47-11)(“2019 BLM Memo.”). The 2019 BLM Memo. states that, during “the Plan of Operation approval phase, [American Magnesium] would not disclose specific details of the mill site or the processing.” 2019 BLM Memo. at 1. The 2019 BLM Memo. also states that, following a public meeting, American Magnesium “agreed the mill site needed to be included in the NEPA analysis,” but then later “informed BLM they had been advised not to share the mill site details, and asked BLM to move forward with drafting the EA without it,” and that American Magnesium “wants to only include an estimated number of potential jobs at the mill site, without specifics for the analysis.” 2019 BLM Memo. at 1. The 2019 BLM Memo. then states:

BLM believes some level of mill site details are required pursuant to 43 CFR 3809.401(b)(2)(ii), 43 CFR 3809.401(c)(1) and PIM 2018-023 in order to conduct the downstream analysis of Green House Gases, water impacts and transportation routes.

The BLM, along with the City of Deming, Luna County and New Mexico Mining and Minerals Division, has discovered each entity is being given conflicting information from AM regarding transportation routes, mill site location and other specifics described in the mining plan.

2019 BLM Memo. at 1.

On October 4, 2019, the BLM wrote a letter to American Magnesium, which states that, on July 25, 2019, BLM held a “public scoping meeting” for the Mining Project. Letter from Bill Childress to Carol Brewka, No Subject at 1 (AR 0000005607)(dated October 4, 2019)(AR 0000005067-0000005068)(“BLM October 2019 Letter”). In the BLM October 2019 Letter, the BLM states that, at this meeting, “[t]he public is highly concerned about the proposed mill site located at the Peru Industrial Park owned by the City of Deming,” and, that the “BLM requires additional preliminary or conceptual information regarding the mill site as described in 43 CFR subpart 3809.401 and 43 CFR 1508.S(a&b).” BLM October 2019 Letter at 1 (AR 0000005607).

Specifically, the “additional preliminary or conceptual information” that the BLM October 2019 Letter requests is:

1. A flow chart of the mill site that details process rates, waste products, and produced products.
2. Usage of water, electricity, and natural gas.
3. Estimated Carbon dioxide emissions.
4. Due to conflicts between the transportation route in the Plan of Operations and the route that was proposed at the public scoping meeting a desired proposed transportation route from the mine to the Peru Industrial Park is required.

BLM October 2019 Letter at 1 (AR 0000005607). In a letter dated October 18, 2019, American Magnesium responded to the BLM’s requests for specifics. See Letter from Carol Brewka to Bill Childress, Re: Permit Tracking No. NMNM 136678 American Magnesium, LLC’s Response to Information Request Dated October 4, 2019 (dated October 18, 2019)(AR 0000005610-00000055617)(“AM October 2019 Letter”). In the AM October 2019 Letter, American Magnesium provides responses to the four specific categories of information that the BLM October 2019 Letter requests. American Magnesium provided the requested flow chart as an attachment to the AM October 2019 Letter. See Figure 4, infra.

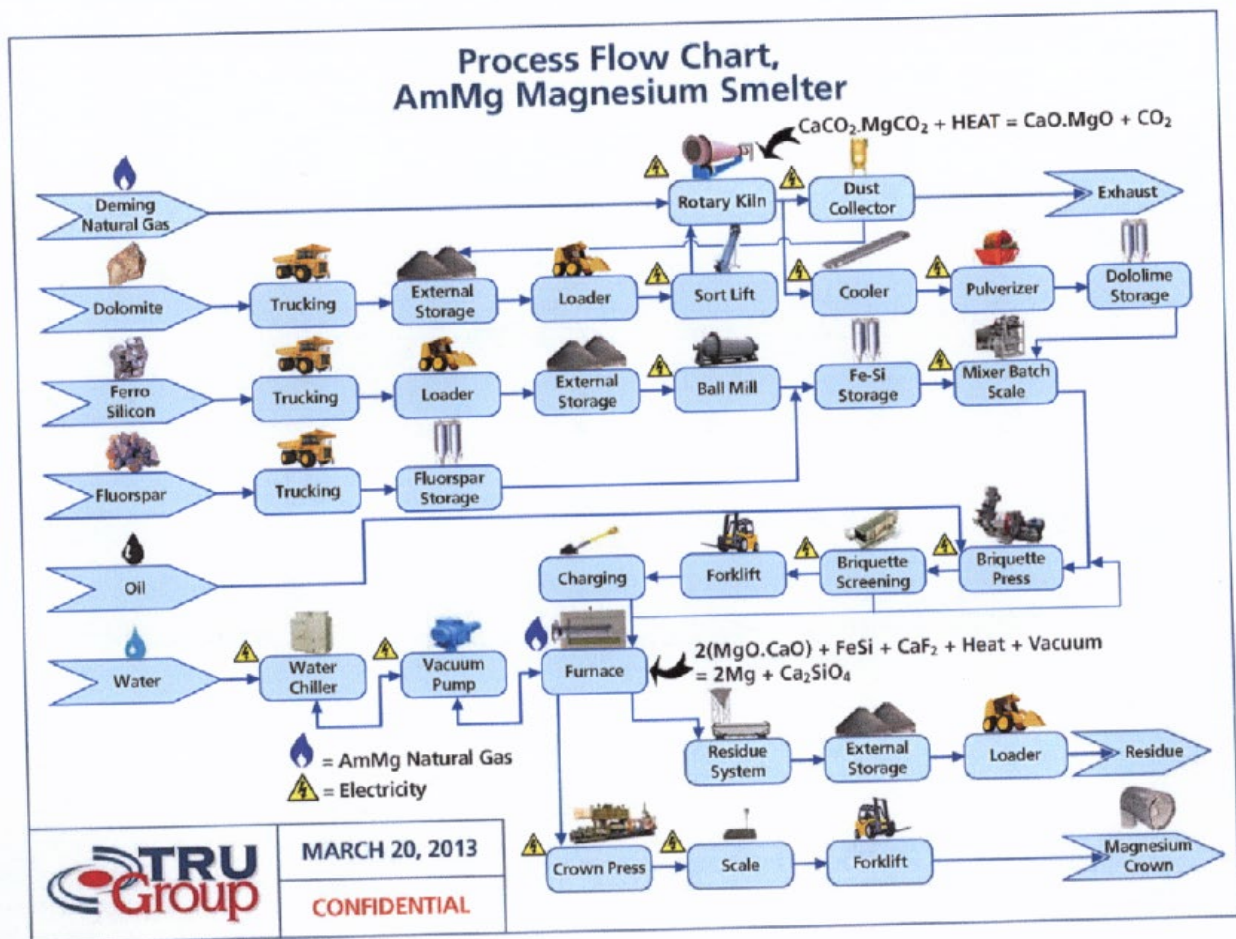


Figure 4: Process Flow Chart. AM October 2019 Letter at 8 (AR 0000005613).

The AM October 2019 Letter states that the “[m]ajor byproducts of the proposed milling process include carbon dioxide and calcium silicate (Ca_2SiO_4),” and that “AmMg is considering using greenhouses to consume the carbon dioxide and selling the calcium silicate to local cement companies.” AM October 2019 Letter at 1 (AR 0000005610). As to the second category of requested information -- the water, electricity, and natural gas usage -- the AM October 2019 Letter states that, based on a magnesium production rate of 30,000 tons-per-year, the usages would be: “17 million gallons of water . . . 73,000 megawatt hours of electricity [and] 4,245 million BTU of energy derived from natural gas.” AM October 2019 Letter at 1 (AR 0000005610). As for the

inquiry regarding carbon dioxide emissions, American Magnesium estimates -- again based on a magnesium production rate of 30,000 tons-per-year -- 181,000 tons-per-year of carbon dioxide production, and again states that “AmMg is considering using greenhouses to consume the carbon dioxide, and thereby eliminate its emission.” AM October 2019 Letter at 2 (AR 0000005611). Last, responding to the BLM’s inquiry regarding the conflicts between proposed transportation routes, American Magnesium “acknowledges that a route different from the one proposed in the Plan of Operations (PoO) was presented at the public scoping meeting. However, AmMg proposes to keep with the transportation route described in the PoO, which uses Highway 11 rather than McCan Road,” and also states that it is

willing to negotiate changes to the proposed transportation route with Luna County and the City of Deming once a permit for the mine is issued and a location for the proposed mill is confirmed. For instance, AmMg is open to using the anticipated Federal truck route from the Columbus port-of-entry that would bypass Deming.

AM October 2019 Letter at 2 (AR 0000005611).

b. The 2018 Permanent Instruction Memorandum.

On September 10, 2018, the BLM issued a Permanent Instruction Memorandum that relates to amendments to “[t]he Bureau of Land Management (BLM) NEPA Handbook (H-1790-1).” Permanent Instruction Memorandum, From Assistant Director, Resources and Planning, to All Assistant Directors, State Directors, and Center Directors, Re: Analysis of Connected Actions under the National Environmental Policy Act (NEPA), available at <https://www.blm.gov/policy/pim-2018-023> (last visited August 2, 2023)(“Instruction Memo.”). The Instruction Memo. states that the BLM’s NEPA handbook “is under revision,” and that, “[u]ntil the complete revision is published, the following text amends the existing handbook to clarify the definition and consideration of connected actions, consistent with current case law.” Instruction Memo. at

Policy/Action. Accordingly, the Instruction Memo. focuses on the NEPA-related concept of a “connected action[],” Instruction Memo. at Policy/Action, which, under the federal regulations, is a concept relevant to the determination of an environmental impact statement’s scope, see 40 C.F.R. § 1501.9(e). Specifically, “[t]o determine the scope of environmental impact statements, agencies shall consider: . . . [a]ctions (other than unconnected single actions) that may be connected actions, which means that they are closely related and therefore should be discussed in the same impact statement.” 40 C.F.R. § 1501.9(e)(1). Actions are “connected” if they: “(i) Automatically trigger other actions that may require environmental impact statements; (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously; or (iii) Are interdependent parts of a larger action and depend on the larger action for their justification.” 40 C.F.R. § 1501.9(e)(1)(i)-(iii).

Regarding the question of non-federal actions as connected actions, the BLM revises its NEPA Handbook to state:

The NEPA process is focused on agency decision-making (40 CFR 1500.1(c), 40 CFR 1508.18, 40 CFR 1508.23). Therefore, a non-Federal action, even if “closely related” to a proposed BLM action, will not be a connected action pursuant to the Council on Environmental Quality regulations, because connected actions are limited to Federal actions. Rather, if the non-Federal action or its effects can be prevented or modified by BLM decision-making, then the effects of the non-Federal action are properly considered indirect effects of the BLM action and must be analyzed as effects of the BLM action (40 CFR 1508.7, 40 CFR 1508.25(c)) (see section **6.8.2, *Direct and Indirect Effects***). Effects of the non-Federal action that cannot be prevented or modified by BLM decision-making may still need to be analyzed in the cumulative effects analysis for the BLM action, if they have a cumulative effect together with the effects of the BLM action (see section **6.8.3 *Cumulative Effects***).

Instruction Memo. at ¶ 2 (emphasis in Instruction Memo.).

c. The EA.

In July, 2020, the BLM issued the EA for the Project. See EA at 1. The EA states that it “has been developed to disclose foreseeable impacts from the mining construction and operations, as required under the National Environmental Policy Act of 1969[, 42 U.S.C. §§ 4321 to 4370m-11] (NEPA).” EA at 1 (AR 0000000017). The EA states at the outset that American Magnesium “has submitted a Plan of Operations (PoO) to Bureau of Land Management (BLM) to mine magnesium for a project area totaling 40-acres on BLM land located in the Florida Mountains Mining District, Luna County, New Mexico,” and, “[i]n addition, American Magnesium proposes to construct a new access road from the unnamed BLM road to the proposed mining area.” EA at 1 (AR 0000000017). In terms of scope, the EA states that, pursuant to federal regulations, an EA’s “scope of review” must “consist[] of ‘the range of actions, alternatives, and impacts to be considered.’” EA at 5 (AR 0000000021)(quoting 40 C.F.R. § 1508.25, now codified at 40 C.F.R. § 1508.1(cc)). The EA’s chapter 2 outlines the Mining Project’s “proposed action and alternatives.” EA at 11 (AR 0000000027). The proposed action is framed: “American Magnesium proposes to produce up to 300,000 tons of dolomite, containing magnesium, per year across approximately 40 acres of BLM land.” EA at 11 (AR 0000000027).

i. The EA on Resource Verification.

In describing the proposed “mining operations” for the Mining Project, the EA states, among other things, that the Mining Project will proceed in three phases, each of which corresponds to a different surface area of disturbance during mining operations: “The Phase 1 mining area consists of 10.2 acres, Phase 2 consists of 6.8 acres, and Phase 3 consists of 5.5 acres.” EA at 11 (AR 0000000027). Aside from surface-area acreage disturbance, the EA does not offer detail regarding the meaning of these “phases,” but does state that “[r]esource verification would

occur during Phases 1 and 2 but not for Phase 3.” EA at 11 (AR 0000000027). As for detail on resource verification, the EA reiterates American Magnesium’s statements in the POs that “[r]esource verification drilling would be required to confirm the quantity and quality of the magnesium content as well as thickness of overburden.” EA at 13 (AR 0000000029). The EA states that “Drill holes would not exceed 100 feet in depth from the surface,” and, that “[a]ny salvageable topdressing obtained during resource verification would be stockpiled in the laydown yard,” before “[e]ach drill hole would be permanently sealed from bottom to top using a neat cement slurry grout.” EA at 13 (AR 0000000029). The EA also states that roads within the 40-acre Mining Project area would need to be constructed “to provide access to exploratory boreholes during resource verification.” EA at 13 (AR 0000000029). The exploratory drilling “would be performed using diamond-bit wet drill rigs or dual-tube reverse circulation (RC) air-rotary rigs,” and “a limited amount of blasting may be necessary to provide equipment access to drill locations.” EA at 13 (AR 0000000029). The EA’s section on resource verification concludes: “If mining does not occur after resource verification, reclamation of any disturbed areas would be completed.” EA at 13 (AR 0000000029).

ii. The EA on Alternatives.

After its discussion of the proposed action, the EA dedicates a single page to alternatives. See EA at 23 (AR 0000000039). The first alternative considered is the “No Action Alternative,” which is “to deny the proposed Plan of Operations,” and compel American Magnesium to “pursue alternative methods for mining and extracting magnesium.” EA at 23 (AR 0000000039). Under the header of “Alternatives Considered but Not Analyzed Further” the EA discusses “two other potential haul routes between the proposed mine location and the conceptual location of the Peru Industrial Park, before formulating the analysis.” EA at 23 (AR 0000000039). One of these

potential routes was dismissed because it proposes traversing the Deming city center, which “would not be acceptable based on the volume of industrial traffic already traversing through the city center, and potential impacts on city businesses and safety of pedestrians from the increase in heavy truck traffic.” EA at 23 (AR 0000000039). The second potential route was dismissed “on the basis of the mileage of dirt roads that would be traversed, leading to a greater impact and increase in dust generated by haul traffic.” EA at 23 (AR 0000000039). The EA’s discussion of alternatives is limited to these transportation-related alternatives. The Administrative Record indicates that these transportation-related alternatives discussed in the EA were added after the May, 2020, publication of the BLM’s Draft EA. See American Magnesium Foothill Dolomite Mine Project Environmental Assessment at 22 (AR 0000008815)(dated May 2020)(AR 0000008790-0000008873)(“Draft EA”); (News Release, BLM New Mexico, Las Cruces District, at 1 (AR 0000007629)(dated May 18, 2020)(“Today, the Bureau of Land Management issued the draft environmental assessment for a proposed magnesium/dolomite quarry mine in Luna County.”). Aside from the “No Action Alternative,” the Draft EA contains no discussion of any alternatives. Draft EA at 22 (AR 0000008815). In their comments to the Draft EA, the Plaintiffs criticized the BLM on this account:

In addition, the Draft EA failed to consider reasonable alternatives, including: (1) allowing only exploration; (2) approving only one phase at a time; (3) allowing mining of only the locatable minerals (after BLM conducts the above-discussed investigations to verify a valuable deposit of a locatable mineral); (4) considering some or all of the project under a Mineral Materials sale and the Part 3600 regulations; (5) reduced environmental impacts through mitigation measures (such as requiring clean burning diesel trucks, etc.); and (6) allowing only helicopter-based exploration.

Letter from Roger Flynn and Jeffery Parsons to BLM EPlanning Submittal and Leighandra Keeven, Re: Foothills Dolomite Mine Draft EA Comments DOI-BLM-NM-L000-2020-0024-EA

at 28 (AR 0000007719)(dated June 16, 2020)(AR 0000007692-0000007724)(“Draft EA Comments Letter”).

iii. The EA on Related Actions.

The EA states, moreover, that “BLM Instructional Memorandum 2018-023 directs the BLM to analyze related actions that are non-federal, and therefore outside BLM jurisdiction, as potential indirect effects of the federal Proposed Action when appropriate, or as cumulative actions with cumulative effects.” EA at 5 (AR 0000000021). Specifically, the EA identifies “as [a] likely indirect effect” the “conceptual transportation of the ore and the conceptual processing of the ore (milling).” EA at 5 (AR 0000000021). Chapter 2.1.8 of the EA considers the “related actions” of the main Mining Project located in the Florida Mountains. EA at 21-23 (AR 0000000037-0000000039). This chapter is divided into two subsections, one titled “Transportation of the Ore,” EA at 21 (AR 0000000037), and one titled “Processing of the Ore,” EA at 22 (AR 0000000038). The chapter concerning transportation states that, based on a production amount of approximately 300,000 tons of Dolomite per year, “American Magnesium estimates that a small fleet of haul trucks will make an average total of 46 round trips per day.” EA at 21 (AR 0000000037). According to the EA, this calculation means “roughly one truck passing any given point on the transportation route approximately once every 6 minutes, if operating between 8 a.m. and 5 p.m. each day.” EA at 21 (AR 0000000037). The destination of these round trips is “the conceptual Peru Mill Site,” and, while the EA states that “[n]o transportation route has been fully identified or approved by the City of Deming or Luna County,” the “conceptual haul route, starting at the proposed mine site, would be approximately 27 miles from mine site to conceptual Peru Mill Site,” and that route would “traverse the existing unnamed BLM road, County Road B016/Camino Doce Rd SW, Hermanas Rd SW, County Rd CO 91, W Spruce St, S 8th St, W Pine St, North Gold Ave

(US-180), and Arrowhead Drive Northwest.” EA at 21-22 (AR 0000000037-0000000038). See Figure 1, supra. The EA also states that “[t]he BLM does not have jurisdiction over the transportation of the ore using public roads, and for the purpose of this analysis, it is assumed that no ore transportation would begin until all of the appropriate permits are obtained.” EA at 22 (AR 0000000038).

As for the “Processing of the Ore,” EA at 22 (AR 0000000038), the EA acknowledges that the mill site has no final location, and that American Magnesium currently has none of the State-level permitting that will be required for the construction or use of the Processing Mill. See EA at 22 (AR 0000000038). Nonetheless, the EA states that, “[t]o consider the potential indirect effects of processing the ore retrieved at the proposed mine, including processing of the ore, the BLM has gathered the following general information regarding processing.” EA at 22 (AR 0000000038).

The EA describes the general process by which the Dolomite is processed:

The milling process involves the calcining of dolomite to dolime (magnesium and calcium oxide) in a rotary kiln.^[10] The dolime will be reduced to magnesium metal crowns using ferrosilicon in a retort furnace. The crowns would be processed into magnesium ingots and alloys ready for sale mainly in the American market.

EA at 22 (AR 0000000038). The EA estimates that this heating and molding process, yielding an approximate 30,000 tons-per-year of marketable magnesium ingots and alloys, would require 17,000,000 gallons of water per year, 73,000 megawatt hours of electricity per year, and

¹⁰To calcine means “to heat (something, such as inorganic materials) to a high temperature but without fusing in order to drive off volatile matter or to effect changes (such as oxidation or pulverization).” Calcine, Merriam-Webster Online Dictionary, <https://www.merriam-webster.com/dictionary/calcining> (last visited August 1, 2024). A rotary kiln, is, in effect, a large-scale rotating cylindrical oven used in industrial contexts. See Rotary kiln, Wikipedia, https://en.wikipedia.org/wiki/Rotary_kiln (last visited August 1, 2024).

4,200,000,000 British thermal units of natural gas per year. See EA at 22 (AR 0000000038). As for byproducts, the EA states that the “[m]ajor byproducts of the proposed milling process include CO₂ and calcium silicate (Ca₂SiO₄).” EA at 22 (AR 0000000038). The EA predicts CO₂ emissions at 181,000 tons-per-year, and also states that, “[p]ending a full feasibility analysis, American Magnesium is considering using greenhouses to consume the CO₂ and would sell the Ca₂SiO₄ byproduct to local cement companies.” EA at 22 (AR 0000000038). The EA also states: “According to American Magnesium’s preliminary processing feasibility study, the conceptual mill facility would generate approximately 550 new full-time jobs to be sourced in Luna County.” EA at 22 (AR 0000000038). This section of the EA concludes: “The BLM does not have jurisdiction over the approval and permitting of the processing facility, unless it is proposed on BLM managed public lands. However, American Magnesium would not begin mine operations until the processing of the ore has been permitted by the appropriate agencies including municipal and state agencies.” EA at 22-23 (AR 0000000038-0000000039).

iv. The EA on Baseline Conditions.

Chapter 3 of the EA is titled “Affected Environment and Environmental Impacts.” EA at 24 (AR 0000000040). This chapter states that it “describes the existing conditions relevant to the issues presented in Table 1 and discloses the potential direct, indirect, and cumulative impacts of the Proposed Action and alternatives on those issues.” EA at 24 (AR 0000000040). Table 1, listed earlier in the EA, provides “[t]he key issues identified during internal scoping and analyzed in this EA.” EA at 6 (AR 0000000022). The EA discusses these ten major issues in Chapter 3: (i) scenic quality; (ii) traffic and public safety; (iii) water quality; (iv) fugitive dust dispersion; (v) greenhouse gas emissions; (vi) noise disturbance; (vii) residential property values;

(viii) recreational hunting of Persian ibex; (ix) the Florida Mountains WSA; and (x) jobs and employment.

In Chapter 3.4, the EA discusses the existing conditions related to traffic and public safety given the increase in traffic that would result from the transportation from the Mining Project Area to the conceptual mill site. See EA at 30-33 (AR 0000000046-0000000048). As for environmental impacts of the traffic, the EA states: “Truck traffic would have indirect effects on the proposed route as BLM does not have jurisdiction along the roads and highways proposed for the potential transportation route, and therefore cannot provide mitigation of the proposed transportation route.” EA at 32 (AR 0000000048). Based on estimates of forty-six round trips per day between the Mining Project area and the conceptual mill site -- which amounts to an approximate “24,000 single trips per year,” EA at 32 (AR 0000000048) -- in conjunction with current traffic data on the relevant roads, the EA predicts that the proposed transportation route

would have a 24 percent increase in traffic each day due to the Proposed Action on County Road B016 and NM-331, between a 5 percent and 15 percent increase each day on NM-418, a 2 percent increase each day on South 8th Street, between a 1 percent and 3 percent increase each day on West Pine Street, and a 1 percent increase each day on North Gold Avenue.

EA at 32-33 (AR 0000000048-0000000049). The EA also predicts, based on crash data from the University of New Mexico’s Traffic Research Unity 2018 Traffic Crash Maps for Luna County, see EA at 30 (AR 0000000046), “potential for up to 10 additional collisions along the transportation route (one on County Road B016, three on NM-331, one on NM-481, four on West Pine Street, and one on North Gold Ave),” EA at 33 (AR 0000000049).

In Chapter 3.5, the EA discusses the existing conditions related to water quality. The EA frames the issue as: “How would surface water quality and groundwater quality and erosion in

downstream ephemeral drainages be maintained during stormwater events?” EA at 33 (AR 0000000049). The EA states:

Surface water quality and groundwater quality may be impacted from mining activities such as boring, ground-disturbing activities, and vehicles and equipment operation and maintenance. The primary impact-causing element is the potential erosion during vegetation removal and mineral extraction activities, and potential oil spills and leaks from equipment operation and maintenance, in addition to stormwater runoff during rain events. The analysis area for stormwater resources is the Mimbres watershed. The impact indicator would be the potential changes to stormwater and groundwater quality.

EA at 33 (AR 0000000049). The Mimbres Watershed is a 4,633-square mile area that traverses Luna, Doña Ana, Grant, and Sierra Counties, New Mexico, with the “majority” of the watershed in Luna County. EA at 33 (AR 0000000049). The watershed has a “semiarid” climate with approximately eleven inches of annual rainfall. EA at 34 (AR 0000000050).

The EA states that “[s]urface water in the proposed project location consists of ephemeral stream channels flow west from the Florida Mountains, into an alluvial fan to a relatively flat basin with no large bodies of surface water.” EA at 34 (AR 0000000050). The EA represents that, according to the United States Fish and Wildlife Service National Wetlands Inventory mapper, these ephemeral stream channels are identified as “intermittent riverine habitats that may be seasonally flooded.” EA at 34 (AR 0000000050)(citing U.S. Fish and Wildlife Service, National Wetlands Inventory, <https://www.fws.gov/program/national-wetlands-inventory> (last accessed July 16, 2024)). The EA asserts that the nearest “water of the U.S.”¹¹ is the Mimbres River, which

¹¹The “waters of the United States” is a term of importance for the Clean Water Act, 33 U.S.C. §§ 1251-1387 (“CWA”), because the CWA “prohibits the discharge of pollutants into only ‘navigable waters,’ which it defines as ‘the waters of the United States, including the territorial seas,’” Sackett v. Env’t Prot. Agency, 598 U.S. 651, 661, (2023)(quoting 33 U.S.C. §§ 1311(a), 1362(7), (12)(A)). Over the last couple of decades, the Supreme Court of the United States has

is located “approximately 13.8 miles northwest of the proposed project.” EA at 34 (AR 0000000050). The EA also states that “[s]urface water from east of the proposed project is routed around the proposed mining area by existing ephemeral drainages and therefore does not come in contact with the proposed mining area.” EA at 34 (AR 0000000050). The EA discusses the results of a 2011 water quality monitoring in the Mimbres Watershed, citing to a report by the New Mexico Education Department (“NMED”):

Water quality parameters included dissolved oxygen, pH, temperature, turbidity, and conductivity, as well as sampling for ions, total nutrients, dissolved metals, and E.coli (NMED 2011). The results of the 2011 study indicated that there were water quality exceedances due to cadmium and lead in Cold Springs Creek and E.coli in the lower reach of the Mimbres River. There is also an existing impairment in the middle Mimbres River for temperature (NMED 2011).

EA at 34 (AR 0000000050)(citations in EA). In addition to this 2001 report, the EA adds that, “American Magnesium tested the Silurian Fusselman Dolomite throughout the proposed mining area to evaluate existing stormwater runoff water quality conditions and determine the potential for stormwater runoff to create acid-generating or deleterious materials from within the targeted mining material.” EA at 34 (AR 0000000050). The results of this testing, discussed later in the EA, are that “[e]xposure and mining of the Silurian Fusselman Dolomite will not create acid-generating or deleterious materials.” EA at 36 (AR 0000000052). The EA continues:

The 2019 lab results indicate that stormwater runoff from the naturally occurring Silurian Fusselman Dolomite would not impact groundwater quality (Daniel B. Stephens & Associates, Inc. 2019b). Therefore, groundwater sampling from the mine site would not be required. In addition, in September 2019, the NMGQB [the New Mexico Groundwater Quality Bureau] confirmed that the proposed project is exempt from the groundwater discharge permit requirements pursuant to Subsection A of 20.6.2.3105 NMAC because stormwater discharge does not exceed the groundwater standards found in Section 20.6.2.3103 NMAC. Therefore, with

toiled with how to interpret this term. See Sackett v. Env’t Prot. Agency, 598 U.S. 651; Rapanos v. United States, 547 U.S. 715 (2006).

the implementation and maintenance of sediment control structures and other BMPs [best management practices] outlined in the SPCC [the spill prevention, control, and countermeasures plan] and SWPPP [the Stormwater Pollution Prevention Plan], no change to groundwater quality in the watershed is expected to occur from the Proposed Action.

EA at 36 (AR 0000000052).

As mentioned in the above-quoted passage, the EA mentions both: (i) a prospective spill prevention, control, and countermeasures plan (“SPCC”), and (ii) a Stormwater Pollution Prevention Plan (“SWPPP”). See EA at 34-36 (AR 0000000050-0000000052). The EA states that the former document, the SPCC, is prepared in accordance with Section 311 of the CWA, 33 U.S.C. § 1321, “which describes the reporting requirements and response actions that would take place in the event of a spill, release, or other unexpected condition, as well as procedures for cleanup and disposal.” EA at 34 (AR 0000000050). The SPCC’s broader purpose is to further § 311’s aim of “prevent[ing] oil from reaching navigable waters and adjoining shorelines, and to contain discharges of oil.” EA at 34 (AR 0000000050). The EA states that American Magnesium “has prepared an SPCC plan,” EA at 34 (AR 0000000050), which describes the “[a]nticipated total oil storage capacity contained on-site,” EA at 36 (AR 0000000052). According to the EA, American Magnesium’s SPCC plan contains procedures and plans for both “‘minor incidental’ and ‘major incidental’ spills.” EA at 36 (AR 0000000052)(source of quoted material not cited). The EA describes minor incidental spills as resulting “from incidents such as operator handling of transfer equipment during fueling, broken hydraulic lines, or engines that leak oil.” EA at 36 (AR 0000000052). Such incidents are to be handled by using “[o]il absorbent boom, sorbent materials, and other spill response materials,” which the EA maintains “will be maintained on-site and within vicinity.” EA at 36 (AR 0000000052). The EA does not describe major incidental spills. The EA states that “[d]aily visual inspections will be conducted for both on-site equipment and the

complete project site prior to operation,” and “[a]nnual inspections will be conducted to ensure that SPCC requirements are being met.” EA at 36 (AR 0000000052). The EA concludes that, “[w]ith the implementation of the SPCC, no impacts to surface water quality are expected from mining activities within the proposed project area.” EA at 36 (AR 0000000052).

The SWPPP, according to the EA, is mandated by Section 402 of the CWA, 33 U.S.C. § 1342, and the relevant regulations. See EA at 34 (AR 0000000050). Section 402 of the CWA, according to the EA, establishes the national pollutant discharge elimination system (“NPDES”), which is intended “to address water pollution concerns by regulating point sources^[12] that discharge into waters of the United States.” EA at 34 (AR 0000000050). The EA states that, under this system, “[f]ederal regulations require stormwater discharges associated with specific categories of industrial activity to be covered under NPDES permits,” and that, “[m]ineral mining is considered a Category III industrial activity.” EA at 34 (AR 0000000050). The EA states, “the proposed project would operate in accordance with CWA NPDES regulations, which would include the preparation of a SWPPP,” and the SWPPP’s purpose is to “identify potential sources of stormwater pollution practices to reduce pollutants in stormwater discharges and to outline procedures the operator would implement to comply with the terms and conditions of the NPDES permit.” EA at 34 (AR 0000000050).

¹²The CWA defines a “point source” as

any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

33 U.S.C. § 1362(14).

The EA does not state explicitly whether American Magnesium has prepared an SWPPP for the Mining Project, but the EA's language suggests that it is yet to do so: "To manage any stormwater runoff, American Magnesium would develop a SWPPP in accordance with NPDES standards and the Environmental Protection Agency (EPA^[13]) would be the permitting and enforcement agency." EA at 35 (AR 0000000051). The EA discusses certain measures that the SWPPP "would include," like "measures to address water pollution concerns by regulating point sources and non-point sources^[14]." EA at 35 (AR 0000000051). The EA identifies "[p]oint sources from the proposed project would include potential erosion from mine benches and the topsoil stockpile, and erosion during the construction of the new access road and culvert," while non-point sources "would include any erosional runoff from outside proposed project area." EA at 35 (AR 0000000051). The EA also describes certain "BMPs" or "best management practices," EA at 16 (AR 0000000032), for working with point sources, which "would include seeding and mulching of disturbed areas, silt fences, straw bale check dams, diversion ditches with energy

¹³The United States Environmental Protection Agency, a federal agency whose mission "is to protect human health and the environment," and is responsible for "writing regulations" to implements Congressional environmental laws." United States Environmental Protection Agency, Our Mission and What We Do, <https://www.epa.gov/aboutepa/our-mission-and-what-we-do> (last accessed August 2, 2024).

¹⁴Unlike "point source," the CWA does not define what non-point sources are, but, under basic principles of logic, the Court infers that non-point sources are all those sources of pollutants that do not fall within 33 U.S.C. § 1362(14)'s definition of "point source." Other courts have reached also this conclusion. See Oregon Nat. Res. Council v. U.S. Forest Serv., 834 F.2d 842, 849 n.9 (9th Cir. 1987)("Nonpoint source pollution is not specifically defined in the Act, but is pollution that does not result from the 'discharge' or 'addition' of pollutants from a point source. Examples of nonpoint source pollution include runoff from irrigated agriculture and silvicultural activities." (source of quoted material not cited)(citing Trustees for Alaska v. E.P.A., 749 F.2d 549, 558 (9th Cir. 1984))).

dissipaters, and rock check dams.” EA at 35 (AR 0000000051). The EA states that “[t]here are no non-point source discharges anticipated that will require scheduled monitoring,” but that

non-point sources will be managed via recommendations contained in the SWPPP to the extent that they may occur during resource verification, mining development, mining, or reclamation with the use of BMPs as necessary, including seeding and mulching of disturbed areas, silt fences, straw bale check dams, diversion ditches with energy dissipaters, and rock check dams.

EA at 35 (AR 0000000051). More speculatively, the EA states that “[t]he SWPPP may require total suspended solids and total dissolved solids sampling of runoff following large rain-producing storm events (typically, following periods of rainfall exceeding 0.25 inch in a 24-hour period), as defined in the SWPPP.” EA at 35 (AR 0000000051). The EA also notes that “[a]ny potential stormwater sampling would be done in accordance with NPDES sampling standards” as well as in accordance with State-level standards in the New Mexico Quality Water Act, N.M.S.A. §§ 74-6-1 to -17 (1967, as amended through 2019). EA at 35 (AR 0000000051). The EA states that its “analysis makes the assumption that the SWPPP would be prepared per NPDES standards and that the EPA would enforce all standards and regulations relating to 40 CFR 122.26.” EA at 35 (AR 0000000051). The EA also states that “[a]dditional monitoring requirements and effluent limitations would be determined by the EPA during development of the required SWPPP,” and that, at some future time, “[i]nspections of stormwater discharges would be conducted by the New Mexico Surface Water Quality Bureau on behalf of the EPA.” EA at 35 (AR 0000000051). The EA also notes that although water is being used to suppress dust around the Mining Project area and the access road, “the use of water for dust suppression is not expected to create runoff from the proposed project area,” and, “[t]herefore, there are no impacts to surface water quality from the use of water for dust suppression within the proposed project area.” EA at 35 (AR 0000000051).

Later in the chapter concerned with water quality, the EA also discusses sediment control in the Mining Project area, which it states will be “achieved by using berms, silt fences, straw bale dams, diversion ditches with energy dissipaters, and rock check dams at appropriate locations to control discharges of pollutants.” EA at 36 (AR 0000000052). The EA notes that, at this time, “American Magnesium would not collect stormwater runoff from the proposed mining area or laydown yard,” but acknowledges that the New Mexico Environment Department’s “Water Quality Control Commission may require stormwater testing requirements to be included in the SWPPP.” EA at 36 (AR 0000000052). When considering the impacts of the no-action alternative on water quality, the EA states that, if no mining is undertaken in the Mining Project area, “[t]he proposed mining location would remain unchanged, and there would be no ground-disturbing activities that may contribute to stormwater quality impairment.” EA at 37 (AR 0000000053).

Chapter 3.6 of the EA discusses concerns related to air quality, generally under the banner of “Fugitive Dust^[15] Dispersion,” which the EA states is the “main pollutant of concern” in Luna County. EA at 37 (AR 0000000053). Although the focus of the chapter is largely fugitive dust -- which the EA sometimes calls “PM₁₀,” referring to “particulate matter^[16] 10 microns in diameter or smaller,” EA at 37 (AR 0000000053) -- the EA also contains discussion of other pollutants, see

¹⁵According to Wikipedia, fugitive dust is “an environmental air quality term for very small particles suspended in the air, primarily mineral dust that is sourced from the soil of Earth’s pedosphere.” Fugitive dust, Wikipedia, https://en.wikipedia.org/wiki/Fugitive_dust (last visited August 2, 2024). The pedosphere is the earth’s crust -- the “part of the earth’s surface that contains the soil layer.” Pedosphere, Merriam-Webster Online Dictionary, <https://www.merriam-webster.com/dictionary/pedosphere> (last visited July 20, 2024).

¹⁶The EA explains that “Particulate matter is a mixture of solid particles and liquid droplets in the air. PM₁₀ refers to particulate matter 10 micrometers or less in diameter (commonly considered ‘dust’).” EA at 39 (AR 0000000055).

EA at 39 (AR 0000000055). The EA states that its air quality analysis “discloses direct, indirect, and cumulative emissions, with consideration of . . . design features that American Magnesium has incorporated into the PoO . . . to reduce the air quality impacts.” EA at 37 (AR 0000000053).

Those design features, which are intended to reduce the impact of fugitive dust, are:

1. Application of water from a water truck as a method of dust control, including use of water around the area to be blasted to reduce potential for dust. Dust generated from any onsite crusher^[17] use would be controlled with water and/or enclosures.
2. Base course or gravel on the proposed access road (approximately 1,334 feet long) and 2 miles of the unnamed BLM road on BLM lands to reduce potential for dust
3. Wet suppression and vacuum controls during drilling
4. No blasting during high wind events (over 25 mph)
5. Baghouse^[18] technology for offsite crushing
6. Development of a Health and Safety Plan that includes identification of appropriate personnel protective equipment for personnel handling dolomite
7. Covered haul trucks

¹⁷The EA states earlier that “an on-site crusher is required to break the magnesium into smaller pieces suitable for transportation.” EA at 14 (AR 0000000030).

¹⁸As Wikipedia explains:

A baghouse, also known as a baghouse filter, bag filter, or fabric filter is an air pollution control device and dust collector that removes particulates or gas released from commercial processes out of the air.[1] Power plants, steel mills, pharmaceutical producers, food manufacturers, chemical producers and other industrial companies often use baghouses to control emission of air pollutants.[2] Bagoes came into widespread use in the late 1970s after the invention of high-temperature fabrics (for use in the filter media) capable of withstanding temperatures over 350 °F (177 °C).

Baghouse, Wikipedia, <https://en.wikipedia.org/wiki/Baghouse> (last visited August 2, 2024).

8. Vehicle speed to 15 mph on unpaved roads.

EA at 37 (AR 0000000053)(punctuation style in EA). The EA also contains conditional statements dealing with future variables regarding the Mining Project: “The potential for NAAQS^[19] exceedances or impacts to air quality index (AQI) values would depend on the type and level of activity and the degree to which dust-causing activities are concurrent,” and that “[t]he analysis assumes that on-site processing via a primary crusher^[20] would be needed.” EA at 37-38 (AR 0000000053-0000000054).

Aside from the primary focus on fugitive dust, the EA states generally:

Air quality is determined by the quantity and chemistry of atmospheric pollutants in consideration of meteorological factors (i.e., weather patterns) and topography, both of which influence the dispersion and concentration of those pollutants. At an elevation of 4,330 feet, Luna County has an arid continental climate with low humidity and average annual rainfall of 9 inches. Winds average around 10 miles per hour for the year, with the prevailing direction being westerly. Late winter and spring are the seasons most closely associated with moderate to strong winds, which can bring blowing dust.

EA at 38 (AR 0000000054). The EA also explains the National Ambient Air Quality Standards (“NAAQS”) that the Clean Air Act, 42 U.S.C. §§ 7401 to 7675 (“CAA”), requires. See EA at 38 (AR 0000000054). The EA explains that the CAA “identifies two types of national ambient air quality standards . . . [p]rimary standards . . . and . . . [s]econdary standards.” EA at 38 (AR 0000000054). The former “provide public health protection, including protecting the health of

¹⁹“The Clean Air Act [42 U.S.C. §§ 7401 to 7675], which was last amended in 1990, requires the EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment.” EA at 38 (AR 0000000054).

²⁰The EA does not define this term, but it seems to refer to the aforementioned “on-site crusher [that] is required to break the magnesium into smaller pieces suitable for transportation.” EA at 14 (AR 0000000030).

‘sensitive’ populations such as asthmatics, children, and the elderly,” while the latter “provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.” EA at 38 (AR 0000000054)(source of quoted material not cited). The EA also discusses the “six nationally regulated ambient air pollutants” that the EPA is responsible for regulating: “carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), PM₁₀, particulate matter equal to or less than 2.5 microns in diameter (PM_{2.5}), sulfur dioxide (SO₂), and lead (Pb).” EA at 38 (AR 0000000054).²¹ The EA also states that

The EPA has delegated the responsibility of regulation and enforcement of the NAAQS to the state level and has approved the New Mexico State Implementation Plan (SIP), which allows the State to enforce both the New Mexico Ambient Air Quality Standards (NMAAQs) and the NAAQS on all public and private land with the exception of tribal land and land within Bernalillo County.

EA at 38 (AR 0000000054). The EA states that “[a]reas that are in attainment of the NAAQS are categorized as either Class I, Class II, or Class III, which determines the increment of air quality deterioration allowed,” and for the Mining Project Area, “[t]he Luna County analysis area is in attainment for the NAAQS, and the NMAAQs and is categorized as a Class II area.” EA at 38 (AR 0000000054).

The EA also discusses human-caused emissions. The EA states that “[h]uman-caused emissions data point to which industries and/or practices are contributing the most to the general level of pollution.” EA at 38 (AR 0000000054). It provides the following Table, Figure 5, infra, regarding “[t]otal human-caused emissions within the analysis area . . . based on 2014 National Emissions Inventory in tons per year”:

²¹Dust, it turns out, can be a harmful and hazardous pollutant: “The EPA regulates PM₁₀ and PM_{2.5} because these particulates are inhalable into the lungs and can cause serious health effects.” EA at 39 (AR 0000000055).

Table 6. Human-Caused Emissions Estimates in the Analysis Area (tons/year)

County	NO _x	CO	VOCs	PM ₁₀	PM _{2.5}	SO ₂
Luna	4,394	9,310	51	9,396	1,402	51

Figure 5: Human-Caused Emissions Estimates. EA at 39 (AR 0000000055).

The EA also states that, according to Air Quality Index values, Luna Country is “mainly in the good range,” but reiterates that “particulate matter (and more specifically PM₁₀) is a pollutant of concern.” EA at 39 (AR 0000000055). The EA provides the following Table, Figure 6, *infra*, that “provides a summary of particulate matter (PM) emissions from construction and operation of the Proposed Action and compares the Proposed Action PM emissions to the 2014 (latest available data) U.S. EPA’s National Emissions Inventory (NEI) PM emissions for Luna County”:

Source Description	PM	PM ₁₀	PM _{2.5}
Luna County Annual Emissions (EPA 2014a)		9,396	1,402
Construction (year 1, estimated to occur during a 6-month time period)			
Improvements to existing unimproved BLM road	17.91	7.56	1.42
Construction of proposed new mine site access road	11.25	5.09	1.16
Development of laydown yard	11.07	5.02	1.16
Salvageable topdressing from Mine Phase I Construction	12.44	5.53	1.21
Salvageable topdressing from Mine Phase 2 Construction	11.57	5.21	1.17
Wind Erosion Disturbed Area	28.82	14.41	2.16
Total Construction ‡	93.06	42.82	8.28
Percent Increase Luna County Annual Emissions		0.45%	0.59%
Onsite Operations			
Front-end Loader Travel during Mine Truck Loading	0.60	0.22	0.022
Mine Truck Travel	27.92	10.27	1.03
Front-end Loader Travel during Mine Site Aggregate Plant Loading	0.60	0.22	0.022
Mine Site Aggregate Processing (On-site crusher)	5.23	2.54	0.54
Front-End Loader Travel during Haul Truck Loading	0.60	0.22	0.022
Blasting	0.23	0.12	0.0070
Drilling of Blast Boreholes	0.024	0.02	0.02

Grader Road Maintenance	0.39	0.17	0.012
Onsite Operations Subtotal	35.60	13.78	1.67
Transportation Operations			
Haul Truck Travel--Paved Road	57.1	11.43	2.81
Haul Truck Travel-Unpaved Road	237.83	74.77	7.48
Transportation Operations Subtotal	294.93	86.20	10.29
Offsite Smelter Plant Operations			
Smelter Aggregate Processing (Total)	3.84	2.99	2.34
Total Operations ‡	334.36	102.97	14.30
Percent Increase Luna County Annual Emissions		1.10%	1.02%
Construction and Operations‡	427.42	145.79	22.58
Percent Increase Luna County Annual Emissions		1.55%	1.61%

Emissions calculated using EPA AP-42 emission factors. Dust control assumptions include the following: Drilling- wet suppression and vacuum controls resulting in 99% control efficiency (AQ-2); Transportation- 60% road dust control efficiency. The unpaved section of County Road B016 is assumed to have a 20% silt content. Unpaved roads that would be improved with gravel or base course are assumed to have a 4.8 silt content. For mill site processing, all equipment in the aggregate processing center will be controlled by a baghouse. The baghouse would be sized for the actual aggregate processing equipment. For fugitive dust emissions calculations, a flow rate of 20,000 cubic feet per minute was assumed. The baghouse exhaust will be limited to a 0.01 grain per ACFM emission rate based on Texas Commission on Environmental Quality documentation for best available control technology (BACT).

‡Construction and operation totals may not equal the sum of all individual entries due to rounding.

Figure 6: Proposed Action Estimates for Particulate Matter (tons per year). EA at 41-42 (AR 0000000057-0000000058).

The EA specifically discusses the air quality impacts associated with each phase of the Mining project. See EA at 42-44 (AR 0000000058-0000000060). The EA states that the Mining Project's construction phase "would focus on preliminary development of a 1,334 feet long access road, followed by Phase I resource verification, which would comprise drill site road construction, grading and development of a 2-acre laydown area, construction of 51 drill pads, and drilling operations," and some "[b]lasting" which "may be required for some portions of resource verification road construction," followed by post-resource verification "development of the new 1,334 feet long access road and maintenance/improvement of a 2-mile existing BLM road." EA

at 42 (AR 0000000058). These activities, according to the EA, “are estimated to take about 2 months,” and these construction activities “would comprise 0.45% of Luna County annual PM₁₀ emissions and about 0.59% of Luna County annual PM_{2.5} emissions.” EA at 42 (AR 0000000058). The EA notes that the closest “sensitive receptors” to these pollutants “are a ranch located 0.6 mile east of the mine site (behind the foothill that would be mined; however this does not appear to be a residential ranch or be inhabited) and about four developed residential lots (some containing multiple buildings that may be occupied) located along County Road B016, about 0.1 to 0.25 mile to the northeast of the intersection of County Road B016 and the existing BLM access road.” EA at 42-43 (AR 0000000058-0000000059). There are also “six developed residential lots (which also contain multiple buildings that may be occupied) located 0.4 to 0.75 mile to the northwest from the existing BLM access road.” EA at 43 (AR 0000000059). The EA predicts that, because the winds in the area are “predominately from the west,” much of the dust from the Mining Project’s construction phase would move away from these residential lots. EA at 43 (AR 0000000059). The EA confirms, however, that “it can reasonably be expected that some or all of 10 residential lots along and near County Road B016 may experience some increased dust, particularly from the improvement of the existing BLM road.” EA at 43 (AR 0000000059).

As for the post-construction Mining Project’s air quality impact, the EA states that “[o]n-site-mining operations would include monthly blasting events to loosen and break up the dolomite rock; on-site crushing of composite; and staging and loading into road haul trucks for transportation off-site.” EA at 43 (AR 0000000059). Some further resource verification may also be necessary: “Operations would also include some resource verification activities in areas to be mined during future phases.” EA at 43 (AR 0000000059). “Each of these activities would result in particulate matter emissions.” EA at 43 (AR 0000000059). Specifically, the EA predicts:

onsite mining would result in 13.78 tpy of PM₁₀ emissions which is about a 0.15% increase in yearly PM₁₀ emissions and 1.67 tpy of PM_{2.5} emissions, which is about 0.12% percent increase in PM_{2.5} emissions. An air quality permit would be required for the onsite crusher. BLM can reasonably rely on compliance with regulatory operating permits to ensure both direct and indirect emissions of regulated air pollutants to not cause or contribute to any significant air quality impacts.

EA at 43 (AR 0000000059). The EA also states that an “[a]ir dispersion modeling analysis was performed to determine the impacts from blasting on the surrounding area,” and that the “[r]esults of the 1-hour averaging period modeling shows the majority dust plume would follow the terrain to the southeast within the first hour of the blast.” EA at 43 (AR 0000000059).

The EA contains two conflicting statements about the pollutant danger of dolomite. The EA states that, while “dolomite is classified as a relatively non-toxic, nuisance dust,” the applicable regulatory guidance identifies dolomite and limestone as “carcinogens and notes the potential for silicosis or other respiratory ailments to occur with repeated or prolonged exposure.” EA at 43 (AR 0000000059). The EA assures that this hazard information, however, “represent risks associated daily, prolonged occupational exposure without protective equipment, rather than exposure to ambient atmospheric conditions,” and that “the analysis of one sample from the site showed that all metal concentrations are below laboratory reporting limits except for aluminum, boron, and selenium.” EA at 43-44 (AR 0000000059-0000000060). The EA states that the use of protective wear would “minimize risk of exposure to potentially toxic metals for on-site workers.” EA at 44 (AR 0000000060).

The EA also contains estimates for increases in fugitive dust that likely would result from the transportation of the mined dolomite to the conceptual mill site and the fugitive dust emissions which would result from the processing of the dolomite at the conceptual mill site. See EA at 44 (AR 0000000060). Specifically, the EA states that “annual transportation would result in 86.20

tpy of PM₁₀ (a 0.92% increase in yearly Luna County PM₁₀ emissions) and 10.29 tpy of PM_{2.5} (a 0.73% increase in yearly Luna County PM_{2.5} emissions),” and the off-site processing at the conceptual mill site would “result in 2.99 tpy of PM₁₀ and 2.34 tpy of PM_{2.5}.” EA at 44 (AR 0000000060). The section concludes:

Considered together, all operation emissions would result in 102.97 tpy of PM₁₀ and 14.30 tpy of PM_{2.5} annually. This comprises a 1.10% and 1.02% increase in Luna County annual PM₁₀ and PM_{2.5} emissions, respectively. These emissions would occur for the life of the project. During the first year of the project, both construction and operations activities would occur. Emissions during year one would be 145.79 tpy of PM₁₀ and 22.58 tpy of PM_{2.5}. This is a 1.55% increase in annual Luna County PM₁₀ emissions and an increase of 1.61% in Luna County PM_{2.5} emissions. This represents a conservative emissions scenario that assumes both activities would happen *in full* in the same year, whereas it is likely that operation emissions would be less than reported in [Figure 6, supra, at 40-41] in the first year.

EA at 44 (AR 0000000060)(emphasis in EA, brackets added).

The EA also discusses the “mitigation and residual impacts” related to air quality. See EA at 45 (AR 0000000061). The EA discusses the means by which fugitive dust emissions would be suppressed, which largely involve the use of water: both the Mining Project area and the access roads would use water “as a method of dust control,” and the EA estimates that daily water use at the Mining Project area would be “5,000 gallons, or as needed,” and the access roads would “require 28,000 gallons per day.” EA at 45 (AR 0000000061). The EA also states the use of “base course for the access road and 2-miles of the unnamed BLM road” would reduce the “silt content of the road,” and thereby decrease dust. EA at 45 (AR 0000000061).

The EA’s Chapter 3.7 concerns the impacts to greenhouse gas emissions from the Mining Project. See EA at 46-49 (AR 0000000062-0000000065). The scope of the greenhouse gas emissions analysis includes the Mining Project’s construction, the Mining Project’s operation, the transportation of the dolomite from the Mining Project area to the Processing Mill site, and the

processing of the dolomite at the Processing Mill. See EA at 46 (AR 0000000062). The EA then offers a general account of the relationship between greenhouse gasses and climate change, which the EA describes as “a statistically significant and long-term change in climate patterns.” EA at 46 (AR 0000000062).

The baseline numbers for greenhouse gasses appear in a table in Chapter 3.7.1.2. See EA at 47 (AR 0000000063). This table “shows estimated global emissions,” and the EA states that greenhouse gas “emissions for the United States and the relative contribution of the metals sector and magnesium production sector to those totals.” EA at 47 (AR 0000000063). The table, shown below, Figure 7, infra, expresses emissions in million metric tons of CO₂e (carbon dioxide equivalent).²²

Annual GHG Emissions	Emissions (MMT CO ₂ e/year)	U.S. Emissions (%)	Global Emissions (%)
Global emissions, from all sources, 2017 [‡]	53,500	N/A	100
U.S. emissions, from all sources, 2017 ^{**}	6,456	100	12
U.S. emissions, metals sector, 2018 ⁺⁺	94	1.5	0.2
U.S. emissions, magnesium production, 2018	1.2	0.02	0.002

Sources: BLM (2018a), EPA (2019g, 2019h)

‡Includes land use changes. 2018 data not yet available.

***2018 data not yet available.**

++1.6 MMT CO₂e from CO₂, 0.4 MMT from HFCs, 1.6 MMT from PFCs, and 0.7 MMT from SF₆.

Figure 7: Estimated Annual Greenhouse Gas Emissions. EA at 47 (AR 0000000063).

²²Carbon dioxide equivalent is a metric that seeks to account for the fact that different greenhouse gases have different warming potentials; for a given gas, the carbon dioxide equivalent “is the mass of CO₂ which would warm the earth as much as the mass of that gas.” Global warming potential, Wikipedia, https://en.wikipedia.org/wiki/Global_warming_potential (last visited August 2, 2024). This metric “[t]hus . . . provides a common scale for measuring the climate effects of different gases.” Global Warming Potential, Wikipedia, https://en.wikipedia.org/wiki/Global_warming_potential (last visited August 2, 2024).

The EA divides the estimates for the greenhouse gas emission associated with the Mining Project into four categories: emissions from the “6-month construction period”; emissions “during operations”; emissions from “[t]ransportation of dolomite for off-site milling”; and emissions from “[t]he smelting process at the conceptual magnesium metal complex.” EA at 47-48 (AR 0000000063-0000000064). As for the construction period, the EA states that, during the 6-month period of the Mining Project’s construction phase, emissions from “fossil fuel combustion required for vehicle and equipment operations” would “result in about 144 metric tons of CO₂e (CO₂, N₂O, and CH₄).” EA at 47-48 (AR 0000000063-0000000064). As for the emissions during operations, the EA states that, assuming “an estimated 158,430 gallons of diesel fuels, operations would result in about 1,618 metric tons of CO₂e (CO₂, N₂O, and CH₄) each year for the 20-year life of the project.” EA at 48 (AR 0000000064). For transportation, according to the estimate of “approximately 12,000 round trips per year along an approximately 27- mile route to the conceptual processing facility,” the EA states that, “annual transport of dolomite would result in about 1,199 metric tons of CO₂e (CO₂, N₂O, and CH₄) each year for the 20-year life of the project.” EA at 48 (AR 0000000064).

As for the processing at the off-site Processing Mill, it is estimated that “that the smelting process would result in 181,000 tons of CO₂ per year (0.16 MMT of CO₂e).” EA at 48 (AR 0000000064). That level of emissions, the EA reports, “would result in a 14% increase in emissions from the magnesium industry and a 0.17% increase in the metals sector.” EA at 48 (AR 0000000064). The EA again states that, “American Magnesium is also considering using greenhouses to consume the CO₂.” EA at 48 (AR 0000000064). The EA also states that the

conceptual mill site processing “could emit 60 tons of SF₆^[23] per year.” The EA notes that SF₆ commonly is used within the magnesium industry, but states that “[s]tudies conducted to characterize the reaction byproducts of SF₆ and molten magnesium determined that most of the SF₆ introduced to the molten metal surface is emitted to the atmosphere and that only a small portion reacts or decomposes.” EA at 48 (AR 0000000064). This fact is of some concern, because, according to the EA, SF₆ has a global warming potential²⁴ “22,800 times as strong as CO₂ and a 3,200-year atmospheric lifetime,” and “is considered [to] have an extreme effect on the ozone layer.” EA at 48 (AR 0000000064). A feasibility report for the conceptual mill site processing facility recommends “substitution of SF₆ with a non-GHG when technology permits,” because “reducing SF₆ emissions would yield significant environmental benefits.” EA at 48 (AR 0000000064). In concluding this section, the EA states: “Considered together, construction, operations, transportation and smelting would result in about 0.18 MMT CO₂e annually (construction occurring in year 1 only). Total GHG emissions would comprise about 0.003% of all U.S. emissions and 0.0003% of global emissions.” EA at 48 (AR 0000000064). In discussing greenhouse gas emission mitigation strategies, the EA states that “[f]uels [sic] reduction and efficiency improvements are the primary methods of controlling GHG emissions from equipment and vehicle operations,” and thus all fossil fueled equipment would be “maintained in accordance

²³SF₆ is sulfur hexafluoride, “an inorganic compound” which is “colorless, odorless, non-flammable, and non-toxic gas,” and has “an octahedral geometry, consisting of six fluorine atoms attached to a central sulfur atom.” Sulfur hexafluoride, Wikipedia, https://en.wikipedia.org/wiki/Sulfur_hexafluoride (last visited August 2, 2024).

²⁴Global warming potential is “an index to measure of how much infrared thermal radiation a greenhouse gas would absorb over a given time frame after it has been added to the atmosphere (or emitted to the atmosphere).” Global Warming Potential, Wikipedia, https://en.wikipedia.org/wiki/Global_warming_potential (last visited August 2, 2024).

with manufacturers' recommendations," and "[i]ddling time of equipment would be limited." EA at 49 (AR 0000000065).

The EA also contains a discussion of how the Mining Project would affect the "recreational hunting opportunities, especially the Persian ibex." EA at 59 (AR 0000000075). This is the section of the EA that most directly discusses the environmental impact to wildlife. The analysis area for this discussion is the entire "75,310-acre boundary of the Florida Mountain range," but much of the analysis focuses more specifically on the Mining Project area. EA at 59 (AR 0000000075). The EA states that there "are many wildlife game species within the Florida Mountains that are of interest to hunters including, mule deer, quail, rabbits, javelina and migratory waterfowl." EA at 59 (AR 0000000075). The EA, however, focuses almost entirely on the Persian ibex.

The EA states that although the exact number of Persian ibex in the Florida mountains are difficult to ascertain "due to the remote nature of this species['] managed range," 2016 and 2018 aerial surveys indicated that there were, at those times, "818 and 460 individuals, respectively." EA at 59 (AR 0000000075). The EA also states that "[r]ecreational hunting of Persian ibex in New Mexico is controlled by the sale of a limited number of annual tags for the Florida Mountains as well as additional 'off-mountain' over-the-counter tag that allows the take of Persian ibex that have left the boundaries of their managed range." EA at 59 (AR 0000000075)(quoting Phone and email communication with Nicole Tataman, NMDGF Big Game Program Manager (October 16, 2019), NMDGF). The EA indicates that the Florida Mountains is the only location in the United States in which the Persian ibex species is managed. See EA at 61 (AR 0000000077).

The EA's section on potential environmental impacts to "Ibex, Game Species and Wildlife Habitat" focuses almost entirely on the possible impact that noise from the Mining Project would

have on this wildlife. See EA at 61 (AR 0000000077). At the outset, the EA claims that the Mining Project area itself encompasses only 40 acres, “or 0.01%” of the entire “75,310 acres that encompass the Florida Mountains.” EA at 61 (AR 0000000077). Moreover, the EA states that “[t]he proposed project area is located within the foothills of the Florida Mountains,” and “does not contain exposed rock cliffs or ridgelines that are preferred by Persian ibex; however, there is undeveloped habitat surrounding and adjacent to the proposed project area.” EA at 61 (AR 0000000077). The EA states that some of the noisier aspects of the Mining Project -- such as “surface mine blasting” -- would “be potentially audible at long distances,” but that “this intrusion would be sporadic, occurring once a month and expected to last seconds in duration.” EA at 61 (AR 0000000077). The “primary source of long-term noise under the Proposed Action that would result from the operation of heavy equipment (e.g., front-end loaders, rotary drills, bulldozers, graders, and haul trucks on site) during mining activities,” which produces noise at “85 dBA^[25] at

²⁵As the EA explains:

Noise is generally defined as loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity and that interferes with or disrupts normal activities. When assessing impacts to ambient noise conditions relative to the levels of noise associated with the propose mine, it is important to understand sound levels and human perception of sound. Sound levels are expressed in decibels (dB), a logarithmic scale, where the quietest audible sound is defined as 0 dB to upwards of 140 dB (the threshold of pain) and beyond. An equivalent sound level expressed in decibels on the A-weighted scale (dBA), corresponds to the average sound level as perceived by the human ear. A change in noise level of at least 5 dBA is required before any noticeable difference can be detected, with a 10-dBA change being perceived as “half as/twice as loud” to the average individual (EPA 1974; U.S. Department of Transportation 2011). Noise exposure is dependent on the time spent near and the distance from the source of noise generation. Impacts to ambient noise conditions occur from the introduction of audible noise (measured in dBA) and the duration of the noise as heard from a specific location.

a distance of 50 feet” and does not decrease back to 40 dBA -- which is the “rural background noise in wilderness and rural areas” -- until “approximately 1.8 miles from the site of operations.” EA at 61 (AR 0000000077).

After describing the various levels of noise associated with the Mining Project, the EA discusses the effect of this noise disturbance on the Persian ibex. See EA at 61-62 (AR 0000000077-0000000078). As the EA concedes, however, because of the animal’s rarity, and because the fact that, “within the United States” the Persian ibex “are only managed within the Florida Mountains,” there are “limited data available regarding impacts and behavior change to Persian ibex from anthropogenic noise disturbance.” EA at 61 (AR 0000000077). Because of this lack of data, the EA discusses noise impacts on bighorn sheep, which the EA states “are a related species, native to New Mexico, with similar habitat requirements and behaviors.” EA at 61 (AR 0000000077). Bighorn sheep “have been evaluated for impacts and behavioral change from mining activities,” and the result has been that

In the presence of mining activity, bighorn sheep have been known to habituate to predictable anthropogenic mining activities (such as vehicular traffic, construction, and consistent increased noise); however, when proximal to disturbance, they have been shown in some cases to have increased “vigilance time” but were not deterred from foraging locations.

EA at 61 (AR 0000000077)(quoting and citing Brian D. Jansen, Paul R. Krausman, James R. Heffelfinger, and James C. de Vos Jr., Influence of Mining on Behavior of Bighorn Sheep, 52(3) The Southwest Naturalist 418 (2009)). The EA then states that although “big game species, such

EA at 50 (AR 0000000066). The EA includes examples of various common sounds that provide reference points for these numbers. See EA at 50 (AR 0000000066). For example, “[n]oisy urban daytime or doorbell” is a 80 dBA, a “[c]hainsaw or ambulance siren” is 120 dBA, and “[n]ormal speech” is 67 dBA. EA at 50 (AR 0000000066).

as Persian ibex or bighorn sheep, do not have specific wildlife management noise disturbance tolerance thresholds,” some disturbance is likely, “at least until the point at which adjacent population acclimate to increased anthropogenic disturbance such as vehicular traffic, construction noise, and mining activities.” EA at 61-62 (AR 0000000077-0000000078). This impact, however, is expected to be limited: “If Persian ibex are within receiving distance for increased noise, expected reaction to noise disturbance would be limited to temporary movement of herds away from the area of disturbance and/or increased vigilance behavior.” EA at 62 (AR 0000000078). Moreover, the EA references “anecdotal evidence from NMDGF management staff,” which indicates that “Persian ibex in the Florida Mountains return to areas of significant noise disturbance.” EA at 62 (AR 0000000078). In sum, the EA concludes that “noise created by the proposed mining activities are not likely to be disruptive to Persian ibex populations,” and “Persian ibex are not likely to be within the proposed project area due to lack of suitable habitat, and there are unlikely to be impacts to this species including temporary displacement.” EA at 62 (AR 0000000078). Any possible displacement, the EA states, “is likely to be temporary as herds acclimate to the increased disturbance.” EA at 62 (AR 0000000078).

Given this possibility of displacement, the Mining Project’s “surface- or noise-disturbing activities . . . may impact hunting opportunities within the proximity of the proposed project.” EA at 62 (AR 0000000078). The EA predicts, however, that any such impact would be temporary, as “[t]he amount of increased noise estimated from the increase in vehicular traffic and use of general machinery is not expected to result in long term displacement or habitat avoidance of Persian ibex herds or individuals within their occupied range.” EA at 62 (AR 0000000078). Accordingly, “no change in annual license sales or recreational value of annual licenses or decrease in use of the area for hunting Persian ibex, is expected.” EA at 62 (AR 0000000078). Last, while the EA

predicts an increased use of the roads around the Mining Project Area associated with construction and dolomite transportation activities, “established access routes for recreational hunters and outfitting businesses with special recreational permits would not be impacted,” although “[r]ecreational hunters and outfitters utilizing County Road B016 and unnamed BLM road may experience an increase in vehicular traffic during mine operational hours.” EA at 63 (AR 0000000079).

Finally, the EA’s Chapter 3.11 assesses the impact of the Mining Project to the Florida Mountains WSA. See EA at 63-67 (AR 0000000079-0000000083). As depicted in Figure 3, supra, at 11, the Florida Mountains WSA is directly due north, south, and east of the Mining Project Area. As the EA puts it, the “proposed project is located adjacent to the Florida Mountains WSA,” and thus “[m]ining operations would have the potential to impact the wilderness characteristics, including naturalness, outstanding opportunities for solitude or primitive and unconfined recreation, and supplemental values/special features.” EA at 63 (AR 0000000079). These potentially impacted categories are derived from Section 2(c) of the Wilderness Act of 1964, 16 U.S.C. § 1131(c). See EA at 64 (AR 0000000080). Before discussing the potential impact of the Mining Project on the wilderness characteristics, the EA discusses the baseline conditions of these characteristics in the Florida Mountains WSA. See EA at 64 (AR 0000000080). As for “naturalness,” the EA states that while “the overall appearance of the Florida Mountains WSA is natural[,] . . . the eastern portion has been impacted by mining, roads, grazing, and associated rangeland developments, which diminish the quality of naturalness.” EA at 64 (AR 0000000080). As for solitude, the EA states that “[w]ithin the Florida Mountains WSA, there is one approximately 3,000-acre area around South Peak, where one may escape all signs of humans for true solitude,” and also that “[o]utstanding opportunities for solitude can also be found in the many

secluded canyons and ridges.” EA at 64 (AR 0000000080). On outstanding opportunities for “primitive and unconfined recreation,” the EA states that “[t]he Florida Mountains WSA offers a variety of outstanding primitive recreational opportunities, including rock climbing, horseback riding, hunting, birding, photography and other naturalist activities.” EA at 64 (AR 0000000080). Last, on “Supplemental Values/Special Features,” the EA notes that the Florida Mountains WSA “contains suitable habitat for a New Mexico State-listed species, night blooming cereus,^[26]” that the “peaks and slopes of the Florida Mountains creates a high scenic quality within the WSA,” and that the “higher elevations of the WSA contain steep, angular, red and gray rock outcroppings.” EA at 64 (AR 0000000080).

The EA predicts that the Mining Project would impact these wilderness features in a variety of ways. In terms of naturalness, the EA states that while “[v]isual impacts and the introduction of the proposed project to the landscape would affect the area visible from the Florida Mountains WSA,” there would be no mining activities within the WSA itself, and therefore “no impacts to WSA naturalness.” EA at 66 (AR 0000000082). The impacts to “outstanding opportunities for solitude” is the wilderness characteristic which the EA predicts is most at risk because of the

²⁶The night blooming cereus is

the common name referring to a large number of flowering ceroid cacti that bloom at night. The flowers are short lived, and some of these species, such as *Selenicereus grandiflorus*, bloom only once a year, for a single night, though most put out multiple flowers over a period of several weeks, each of which opens for only a single night. Other names for one or more cacti with this habit are princess of the night, Honolulu queen (for *Hylocereus undatus*), Christ in the manger, dama de noche, and queen of the night (which is also used for an unrelated plant species).

Night-Blooming Cereus, Wikipedia, https://en.wikipedia.org/wiki/Night-blooming_cereus (last visited August 2, 2024).

Mining Project. EA at 66 (AR 0000000082). The EA states that such opportunities “would be impacted from the presence of the proposed project and the large increase in transportation traffic heard and seen near the western boundary of the Florida Mountains WSA,” and also “would potentially be impacted when the proposed project is visible and blasting and operating operations may be heard.” EA at 66 (AR 0000000082). There would be no solitude-related impacts to South Peak, however, because, according to the EA, “[t]he proposed project area would not be visible from South Peak.” EA at 66 (AR 0000000082). Moreover, the EA asserts that solitude-related impacts would also be confined to the WSA’s edges and only during weekdays:

Short-term contrasts created by the mining project at the WSA boundary would be moderate to weak; long-term impacts to the viewshed from this location would be weak and the reclaimed mine project would not attract the attention of the casual observer and would not dominate the viewshed (see [Figure 3, *supra*, at 11]). Impacts to solitude would occur along the west central portion of the WSA during normal mine operation hours through the 20-year life of the mine. Because the proposed mine is expected to operate weekdays only, impacts to outstanding opportunities to solitude should occur only during the week. There should be no effects to outstanding opportunities for solitude during the weekends. Once the proposed project area is reclaimed, there would be no mining noise or truck traffic impacts along the WSA boundary or other areas within the west central portion of the WSA.

EA at 66 (AR 0000000082). The EA states that outstanding opportunities for primitive and unconfined recreation in the Florida Mountains WSA “would not be affected by the proposed activity,” EA at 66 (AR 0000000082), and the supplemental values and special features of the WSA would not be impacted by the Mining Project because, again, “[t]he proposed project is located adjacent to the Florida Mountains WSA,” EA at 67 (AR 0000000083).

v. The Conceptual Feasibility Report.

In discussing the environmental impacts from the Processing Mill, the EA cites from a document which the EA refers to as “American Magnesium’s preliminary processing feasibility

study.” EA at 22 (AR 0000000038). A third-party engineering consultancy group, at American Magnesium’s behest, prepared this study, which is dated April 25, 2013, and is in the administrative record. See Report, Conceptual Feasibility of a Magnesium Metal Complex near Deming, NM, USA, American Magnesium LLLP (dated April 25, 2013)(AR 0000004702-0000004776)(“Conceptual Feasibility Report”). The Conceptual Feasibility Report contains a section called “[e]nvironmental Issues,” and discusses, among other things, the “process input[s]” and “process outputs” of the “smelter.” Conceptual Feasibility Report at 61-62 (AR 0000004773-0000004774). The Conceptual Feasibility Report contains a chart that identifies the following “process emissions or wastes”: (i) a pollutant called “Dolomite Dust,” which is produced in an amount of 700 tons per year; (ii) the chemical compound “CO₂,” which is produced in an amount of 181,000 tons per year; (iii) a pollutant called “Magnesium Residue,” which is produced in an amount of 180,000 tons per year; (iv) a pollutant called “Magnesium Sludge,” which is produced in an amount of 2,300 tons per year; (v) a pollutant called “Waste Oil,” which is produced in an amount of 20,000 liters per year; and (vi) the chemical compound “SF₆,” which is produced in an amount of sixty tons per year. Conceptual Feasibility Report at 62 (AR 0000004774). The Conceptual Feasibility Report describes the “properties” of these pollutants as follows:

CO₂ (Carbon Dioxide)

Carbon dioxide is a color less, odorless gas. Major impact to environment is the effect on global warming and is considered a green house gas.

Dolomitic Lime (MgO. CaO)

Dolomitic Lime is odorless, white-grayish in color. Contact can cause irritation to eyes, skin and respiratory system. The material is not flammable or combustible. It may react with acids to produce heat and steam explosions. Emissions from the source are normally considered nuisance dust, and will have ecological impact on local surface water, raising pH up to 12.4 in large quantities. Particulates less than 10 microns have been shown to have health effects on respiratory system in humans.

Magnesium Process Residue ($\text{Ca}_2\text{SiO}_4 + \text{FeSi} + \text{MgO} \cdot \text{CaO} + \text{CaF}_2 + \text{Mg} + \text{Mg}_3\text{N}_2$)

Magnesium residue is a residual product of reaction in the Pidgeon process. It is gray-white in color and is not flammable or combustible. Due to the presence of residual dolomitic lime, magnesium nitride and magnesium metal exposure to acids or water will result in the liberation of heat, hydrogen and ammonia. Material will have a detrimental effect on surface and underground aquifers increasing pH and ammonia levels. The FeSi and CaF_2 components are generally considered inert to the environment and pose no health or environmental problems.

Magnesium Sludge ($\text{MgCl}_2 + \text{KCl} + \text{MgO} + \text{NaCl} + \text{CaCl} + \text{Mg}_3\text{N}_2 + \text{Mg} + \text{Be} + \text{Al} + \text{Zn} + \text{Mn}$)

Raw magnesium crowns are refined by using a mixture of salts called refining flux. The major constituents of the flux consist of magnesium chloride, potassium chloride and fluorspar. The resulting sludge consists of a variety of elements outlined above depending whether the process is producing alloy or pure metal. Sludge is very hygroscopic and will react with water or acids to release heat, hydrogen and ammonia. Material will have a detrimental effect on surface water and underground aquifers increasing chloride, nitride and possibly toxic beryllium levels. Air contamination consisting of water, hydrogen and ammonia is minimal due to low release rates and quick dispersal.

Waste Oils

Oil and lubricants are used throughout the plant; necessary for equipment maintenance. Material will have a detrimental effect on surface water and underground aquifers.

 SF_6 Gas

This gas is an inert gas when blended with 99% by volume carbon dioxide and is used to prevent molten magnesium from burning in the absence of chloride fluxes. This gas is critical in ingot casting; dc casting and high pressure die casting. Although this gas is inert, it is considered have an extreme effect on the ozone layer, and is targeted for replacement by the magnesium industry.

Conceptual Feasibility Report at 62-63 (AR 0000004774-0000004775). After discussing these properties, the Conceptual Feasibility Report provides one final section, titled “Proposed Methods of Control, Disposal, and Storage.” Conceptual Feasibility Report at 63 (AR 0000004775). This section reads, in its entirety:

 CO_2 (Carbon Dioxide)

Integral part of the process, no control required.

Dolomitic Dust (MgO, CaO)

Process emissions will be controlled by standard cyclone and bag house technology. Present standards are 4.4 kg/t of product produced. Additional controls can be placed to reduce -10 micron emissions, if required, to minimize health risks.

Magnesium Process Residue

This is major process waste. Storage should be in a location, which will have minimal impact on surface and underground aquifers. Since the major constituent of this waste is Ca_2SiO_4 , local cement companies can add up to 10% by weight to clinker production.

Magnesium Sludge

Storage of this waste must be restricted from impacting surface or underground aquifers. No secondary use is known at this time.

Waste Oils

It is recommended that all oil and lubricant wastes be fed to the kilns as supplemental fuel or expedited to a regional oil treatment center.

SF₆

It is recommended that substitution with a non-green-house gas is adopted when technology permits.

Conceptual Feasibility Report at 63-64 (AR 0000004774-0000004775).

d. The Finding of No Significant Impact, Decision Record, and Initial Challenge.

On July 21, 2020, Wallace signed a Finding of No Significant Impact regarding the Mining Project. See Finding of No Significant Impact (dated July 21, 2020)(AR 000000002-0000000013)(“FONSI”). In the FONSI, Wallace wrote:

Based upon review of the EA and the supporting documents, I have determined that the proposed action, which is the federal action under review by the BLM, is not a major federal action and will not significantly affect the quality of the human environment individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity as defined in 40 C.F.R. 1508.27 and do not exceed those effects described in the

Mimbres RMP/FEIS.^[27] Therefore, an environment impact statement is not needed.

FONSI at 1 (AR 0000000002). On August 7, 2020, Childress signed a letter outlining the Decision Record, which authorizes the Mining Project as described in the EA. See Decision Record, Bureau of Land Management Las Cruces District Office, Environment Assessment, DOI-BLM-NM-L000-2020-0024-EA, American Magnesium Foothill Dolomite Mine Project at 1 (AR 0000000100)(dated August 7, 2020)(AR 0000000100-0000000112)(“Decision Record Letter”). The Decision Record Letter states that “[m]itigation measures and design features identified in Chapters 2 and 3 of the EA have been formulated into stipulations found in Section II” of the Decision Record. Decision Record Letter at 1 (AR 0000000100).

²⁷The Mimbres RMP/FEIS is “the 1993 Mimbres Resource Management Plan and Final Environmental Impact Statement.” FONSI at 1 (AR 0000000002). The BLM’s website describes this document as follows:

The Mimbres Resource Management Plan was prepared in 1993 to provide a comprehensive framework for managing public land and for allocating resources using principles of multiple use and sustained yield. This document formally records the Bureau of Land Management’s [sic] decisions for managing approximately 3 million surface acres of public land and 4.1 million subsurface acres in the Mimbres Resource Area. The Mimbres Resource Area encompassed BLM administered public land in Dona Ana, Luna, Hidalgo, and Grant counties in southwestern New Mexico. The Mimbres Resource Management Plan is the current resource plan for Dona Ana, Luna, Hidalgo, and Grant Counties in the Las Cruces District Office management area.

United States Department of the Interior, Bureau of Land Management, Mimbres Resource Management Plan, <https://eplanning.blm.gov/eplanning-ui/project/72801/510> (last visited August 2, 2024). See United States Department of the Interior, Bureau of Land Management, Las Cruces District Office Mimbres Resource Area, Mimbres Resource Management Plan (dated December 1993), https://eplanning.blm.gov/public_projects/lup/72801/97036/117193/LCDO_-_1993_-_Mimbres_Resource_Area_RMP.pdf (last visited August 2, 2024).

Just over a month later, the Plaintiffs filed their Petition for Review of Agency Action, filed September 11, 2020 (Doc. 1)(“Initial Petition”).²⁸ Then, in May 2021, BLM issued another Decision Record, again signed by Childress. See American Magnesium Foothill Dolomite Mine Project, Decision Record, Document No. DOI-BLM-NM-L000-2020-0024-EA (dated May 2021, signed May 11, 2021 (AR 0000000114-0000000124)(“Decision Record”). The summary of the Decision Record states:

This document constitutes the Decision Record (DR) of the United States Department of the Interior and the Bureau of Land Management (BLM)_ [sic] for the Foothill Dolomite Mine (Project)(BLM Case File Number NMNM-136678). This DR approves the construction, operation, and reclamation of the Project on public lands near Deming, New Mexico., [sic] as analyzed in the Environment Assessment, DOI-BLM-NM-L000-2020-0024-EA (EA) dated July 2020. This approval will take the form of an approved mining plan of operation and concurrence under the BLM’s 43 CFR Part 3809 and 43 CFR 3715 regulations, consistent with the management goals in the Mimbres Resource Management Plan (1993), and in accordance with the Mining Law and Federal regulations regarding mining operations found in 43 CFR subparts 3715 and 3809.

Decision Record at 2 (AR 0000000115). The Decision Record also discusses the background of the project, the alternatives considered, public involvement, and compliance and monitoring of the Mining Project. See Decision Record at 2-5 (AR 0000000115-0000000118). Relevant here, the Decision Record states, “[t]he BLM considered two alternatives, the Proposed Action and the No Action Alternative, and has selected the Proposed Action as described in the EA,” and that, “[n]o other alternatives were analyzed in the EA because the Proposed Action includes applicant-committed environmental measures to minimize impacts.” Decision Record at 3 (AR 0000000116). The Decision Record also states, “[t]he Proposed Action allows for the construction, operation, and reclamation of the Foothill Dolomite Mine near Deming, New Mexico

²⁸The Initial Petition is described in greater detail below in the Procedural Background section of this opinion. It is mentioned here only for factual context.

in accordance with the Plan of Operations, which incorporates design features, best management practices, and applicant-committed environmental protection measures intended to mitigate potential impacts.” Decision Record at 3 (AR 0000000116). Moreover, discussing the public comments received during the comment period, the Decision Record states that “a number of the comments primarily focused on the NEPA process, transportation, the mill site, water quantity, Persian ibex, and the Mining Law,” and that several of these comments “resulted in BLM adding clarifying information to the EA,” but the “additional information did not result in altering the analysis or any substantive change in the Propose[d] Action, or BLM’s determination in the finding of no significant impact.” Decision Record at 5 (AR 0000000118).

e. Post-Briefing Agency Actions.

After the Plaintiffs filed the Initial Petition, this case was litigated before the Court for nearly three years before the Court heard the parties’ merits arguments on July 12, 2023.²⁹ See Clerk’s Minutes at 1, filed July 12, 2023 (Doc. 54). After the merits hearing, on October 30, 2023, the BLM issued a new letter, signed by Wallace, which is titled “Decision” and “Mine Plan of Operations Modification Approved.” Letter, Decision, Mine Plan of Operations Modification Approved, from BLM to Carol Ness (dated October 30, 2023), filed November 3, 2023 (Doc. 55-1)(“Modification Letter”). In the Modification Letter, the BLM states: “The Las Cruces District Office has reviewed the American Magnesium Revised Drilling Plan modification to your Plan of Operations (Amendment case file NMNM 136678) that was submitted in September 2022.” Modification Letter at 1. The Modification Letter states that the “BLM prepared a Determination

²⁹The Court describes the relevant portions of this procedural history below in the Procedural Background section of this opinion. Here the Court provides this information for the purpose of factual context.

of NEPA Adequacy,” which was offered for public comment between August 15, 2023, and September 14, 2023, during which time “[t]he BLM received 181 comment letters,” and thereafter “appropriately addressed them.” Modification Letter at 1. The Modification Letter states that, “[a]ccordingly, a Finding of No Significant Impact was issued.” Modification Letter at 1.

The Modification Letter contains little detail about what the modifications to the original Mining Project entail. The associated Finding of No Significant Impact, however, contains more detail. See Finding of No Significant Impact (dated October 30, 2023), filed November 3, 2023 (Doc. 55-2)(“Second FONSI”). In the Second FONSI, the BLM states:

American Magnesium has submitted a modification to their existing Plan of Operations (Plan) to change how the resource confirmation drilling would be conducted. The Plan Modification is proposing a new additional staging area, changing from the grid drill pattern to five drill sites, and accessing the southside of the project area using an existing road/two-track. American Magnesium is proposing to access the mine site by traveling southeast two miles on an existing unnamed road as described in the Environmental Assessment (EA) DOI-BLM-NM-2020-0024-EA and continuing to travel an additional 0.55 mile southeast on the unnamed road to an additional unnamed road/two-track. Before using the unnamed road/two-track, which crosses private land, American Magnesium will regrade the road and repair washouts as needed.¹ American Magnesium will then travel approximately 0.40 mile west southwest on the unnamed road/two-track and then travel overland approximately 0.25 mile to the new staging area (See Figures 1 and 3 in the Plan Modification). The staging area would be 40 feet by 60 feet. From the staging area a skid mounted drill rig would be winched up the hillside to two of five drill locations. From there the drill rig would travel overland along a ridgeline to the other three drill locations. At each location multiple drillholes would be drilled to a maximum depth of 150 feet. Once drilling is complete either reclamation or mining, as analyzed in the EA, would occur.

Second FONSI at 1. In short, this proposed modification entails “a new additional staging area, changing from the grid drill pattern to 5 drill sites, and accessing the southside of the project area using an existing unnamed road/two-track,” a portion of which crosses private land. Second FONSI at 1.

2. The Parties.

Friends of the Floridas (“Floridas Friends”) “is a nonprofit organization based in the Deming, New Mexico area whose mission is to protect the public lands in the Florida Mountains and nearby areas.” First Amended Petition for review of Agency Action ¶ 43, at 12, filed June 9, 2021 (Doc. 18)(“First Amended Petition”). New Mexico Wilderness Alliance (“Wilderness Alliance”) is “a 501(c)(3) nonprofit organization based in Albuquerque, New Mexico, dedicated to the protection, restoration, and continued enjoyment of New Mexico’s wildlands and wilderness areas, with thousands of members across the state.” First Amended Petition ¶ 44, at 13. WildEarth Guardians is “a 501(c)(3) non-profit membership organization based in Santa Fe, New Mexico, with offices throughout the West.” First Amended Petition ¶ 45, at 13. WildEarth Guardians’ membership is “dedicated to protecting and restoring the wildlife, wild places, and wild rivers of the American West.” First Amended Petition ¶ 45, at 13. Gila Resources Information Project (“Gila Resources”) is a 501(c)(3) nonprofit based in Silver City, New Mexico, organized with a “mission [] to promote community health by protecting the environment and natural resources of southwest New Mexico, including protecting surface water, groundwater, wildlife, and air quality.” First Amended Petition ¶ 46, at 14. Amigos Bravos is a 501(c)(3) nonprofit based in Taos, New Mexico, which is “guided by social justice principles and dedicated to protecting and restoring the waters of New Mexico.” First Amended Petition ¶ 47, at 14. Amigos Bravos works “to ensure that New Mexico’s mining laws protect clean water and the communities that depend on clean water for drinking, irrigation, recreation, and cultural traditions.” First Amended Petition ¶ 47, at 14.

BLM is a federal agency within the United States Department of the Interior, which is the entity responsible for the management and protection of the public land at issue in this dispute.

See First Amended Petition ¶ 52, at 16. Scott Cooke is the District Manager of BLM’s Las Cruces District,³⁰ and William Childress is one of Cooke’s predecessors in that role. See First Amended Petition ¶ 52, at 16. David Wallace is the Assistant District Manager of BLM’s Las Cruces District. First Amended Petition ¶ 52, at 16. American Magnesium is “a New Mexico limited liability company that was formed on April 30, 2013, for the business of owning mining interests and developing mining, processing and selling magnesium and other minerals and related substances.” Plan of Operations for Magnesium Mining, Deming, New Mexico at 1-2 (AR 0000004174)(dated March 2017)(AR 0000004164-0000004282)(“Initial PO”).

a. The Plaintiff Organizations’ Members.

Wesley Light represents that he is the President and a Steering Committee Member of the Floridas Friends, and that he resides in Luna County. See Declaration of Wesley Light in Support of Plaintiffs’ Opening Brief ¶ 1, at 2 (executed February 13, 2023), filed February 21, 2023 (Doc. 47-1)(“Light Decl.”). Light asserts that “[m]embers of FOTF, including me, use, enjoy, and value the lands and resources of the Florida Mountains, including the lands in the Mahoney Park area adjacent to the Foothills Dolomite Mine Project.” Light Decl. ¶ 4, at 3. Light states that his use and enjoyment of the Florida Mountains -- and the area around the proposed project -- include “viewing the natural landscapes, finding solitude, photographing native plants and animals, hiking, camping, and hunting.” Light Decl. ¶ 4, at 3. He states, moreover, that he “reside[s] four miles west of the contiguous BLM lands surrounding the Project,” and has “personally used the Mahoney Park area (including the mine site) for recreation, peace, and solitude since 1995.” Light Decl. ¶ 6, at 3. Light states that he has been “within 50 feet of the Project site” on “numerous occasions”

³⁰See footnote 1, supra, at 1.

and that he hiked “within the 40 acre Project site on February 5, 2023.” Light Decl. ¶ 8, at 4. Light asserts, moreover, that “FOTF members live in close proximity to the Project and use on a daily basis the roads that will be used by the Project,” Light Decl. ¶ 4, at 3, and Light states that he can “view the Project site from windows in [his] home,” Light Decl. ¶ 9, at 6. Light concludes by stating that he “intend[s] to continue to the use and benefits provided to [him] by the public land within and surrounding the Project site, unless the Project is undertaken.” Light Decl. ¶ 12, at 6.

Lee G. Pattison represents that he is member of the Wilderness Alliance and has been for “over 18 years.” Declaration of Lee G. Pattison in Support of Plaintiffs’ Opening Brief ¶ 2, at 2 (executed February 4, 2023), filed February 21, 2023 (Doc. 47-2)(“Pattison Decl.”). Pattison states that he has explored the Florida Mountains Wilderness Study Area “for over 20 years,” and spent “two days and a night out there” as recently as January, 2023. Pattison Decl. ¶ 4, at 3. Pattison also states that he has “explored the area where the 40-acre mine site was approved by BLM as well as the adjacent part of the WSA.” Pattison Decl. ¶ 5, at 3. Describing his activities during these visits, Pattison says: “I hike, watch wildlife, backpack and camp, and enjoy the peace and quiet of these lands.” Pattison Decl. ¶ 5 at 3. Pattison states that he has seen a herd of Ibex,³¹ see Figure 8, infra, “not far from this proposed mine site.” Pattison Decl. ¶ 5, at 3.

³¹Ibex is “is any of several species of wild goat (genus *Capra*), distinguished by the male’s large recurved horns, which are transversely ridged in front.” Ibex, Wikipedia, <https://en.wikipedia.org/wiki/Ibex> (last visited August 2, 2024). While Ibex are native to “Eurasia, North Africa and East Africa,” Ibex, Wikipedia, <https://en.wikipedia.org/wiki/Ibex> (last visited August 5, 2024), the New Mexico Department of Game and Fish introduced one particular subspecies of ibex -- the Persian Ibex (*capra aegagrus*) -- to the Florida Mountains in 1970. See New Mexico Department of Game and Fish, Wildlife Notes, Persian Ibex at 1 (undated), <https://www.wildlife.state.nm.us/download/education/conservation/wildlife-notes/mammals/Persian-ibex.pdf> (last visited August 5, 2024). Originally, Game and Fish imported fifteen Persian Ibex and introduced twenty-seven more “[s]oon after.” New Mexico Department of Game and Fish, Wildlife Notes, Persian Ibex, supra, at 1. Today, “[t]he Bureau of Land Management has



Figure 8: A mature Persian Ibex billy in the Florida Mountains. Credit: Dr. Nicole Tatum, available at <https://magazine.wildlife.state.nm.us/a-rare-glimpse-persian-ibex-in-the-floridas/> (last visited August 2, 2024).

Pattison also asserts that he moved to the Florida Mountains area after his retirement, in part, because of access and ease of use of these outdoor areas, see Pattison Decl. ¶ 4, at 3, and that, if the mining project moves forward, “it would definitely end my use of the lands at and near the site,” Pattison Decl. ¶ 7, at 4, because Pattison’s “uses are totally incompatible with the uses of the public lands at the site approved by the BLM, including the immediate ground disturbance, ground

established an optimum, supportable number of 400 animals for this localized population,” and, to “achieve and maintain this target, NMDGF annually conducts aerial surveys, determines populations and offers public and management hunts accordingly.” New Mexico Department of Game and Fish, Wildlife Notes, Persian Ibex, supra, at 1. Hunting Persian Ibex is a profound challenge for even the most accomplished sportsmen and -women, as these creatures are “[s]ecretive” and possesses a “keen eyesight.” New Mexico Department of Game and Fish, Wildlife Notes, Persian Ibex, supra, at 1. Moreover, the Persian Ibex is remarkably nimble, with the ability to jump “several times their own height” and hooves that allow them to “cling to rocky surfaces and traverse sheer cliffs.” New Mexico Department of Game and Fish, Wildlife Notes, Persian Ibex, supra, at 1. Persian Ibex stand “approximately 30 inches at the shoulder” -- roughly the height of an English Mastiff -- and adult males weigh up to 150 pounds, with females weighing up to 90 pounds. Game and Fish, Wildlife Notes, Persian Ibex, supra, at 1; English Mastiff, https://en.wikipedia.org/wiki/English_Mastiff (last visited August 1, 2024).

clearance, road building, drilling, blasting, truck traffic, and Project construction,” Pattison Decl. ¶ 11, at 4-5.

Michael P. Berman represents that he is a WildEarth Guardians member, and lives “just to the north of the Florida Mountains in Silver City, New Mexico.” Declaration of Michael P. Berman in Support of Plaintiffs’ Opening Brief ¶¶ 1-2, at 2 (executed February 15, 2023), filed February 21, 2023 (Doc. 47-5)(“Berman Decl.”). Berman states that he is a landscape photographer, and, when he moved to New Mexico in the 1990, he photographed the Florida Mountains as part of a project to photograph all of New Mexico’s WSAs. See Berman Decl. ¶¶ 3-4, at 3. Berman’s first visit to the site of the proposed mining project was at this time, in 1990. See Berman Decl. ¶ 4, at 3. Berman states that, since then, he and his wife try to make trips to the area “once or twice a year,” and “[s]everal times” the couple have “spent a couple days exploring the Florida Mountains, including the lands that will be adversely affected by the Mine’s operations.” Berman Decl. ¶ 6, at 3. Berman states, moreover, that he is a hunter, and has once drawn a tag³² to hunt Ibex in the Florida Mountains, and applies each year in hopes of securing another Ibex tag. See Berman Decl. ¶ 5, at 3. He states that he also hunts javelina³³ in the Florida

³²To legally hunt big-game species in New Mexico, including the Persian Ibex, “[a] carcass tag is required in conjunction with the license.” New Mexico Department of Game and Fish, Big Game Draw Application - Frequently Asked Questions at 1 (updated for 2023-24 License Year), at <https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.wildlife.state.nm.us%2Fdownload%2Fhunting%2Flicense-information%2Fapplication-draw%2FFAQ-2024.docx&wdOrigin=BROWSELINK> (last visited August 2, 2024).

³³As Wikipedia describes:

A peccary (also javelina or skunk pig) is a pig-like ungulate of the family Tayassuidae (New World pigs). They are found throughout Central and South America, Trinidad in the Caribbean, and in the southwestern area of North America. They usually measure between 90 and 130 cm (2 ft 11 in and 4 ft 3 in) in length,

Mountains, “including around the lands that will be adversely affected by the Mine’s operations.” Berman Decl. ¶ 5, at 3. Berman states that he intends to continue visiting the Florida Mountains’ “fragile wilderness” and the area around the proposed mine, but that “[d]eveloping a mine right in the belly of the foothills would forever change its character, and deter both the work I do there and the pleasure I take in visiting and recreating in the areas, within, adjacent to, and around the Mine that will be affected by mining activities.” Berman Decl. ¶ 5, at 3.

Allyson Siwik represents that she is a Gila Resources member and its Executive Director. See Declaration of Allyson Siwik in Support of Plaintiffs’ Opening Brief ¶ 1, at 2 (executed February 14, 2023), filed February 21, 2023 (Doc. 47-3)(“Siwik Decl.”). Siwik states that Gila Resources’ “members, including me, use and enjoy the natural recourse of southwest New Mexico, including the lands around the proposed American Magnesium Foothills Mine.” Siwik Decl. ¶ 10, at 4. She also states that Gila Resources’ members use the area around the proposed mine “for various forms of recreation, including hunting, hiking, photography, botanizing, birding, and spring wildflower viewing,” and that these forms of recreation “will be adversely affected by the Mine’s noise, wildlife disturbances, truck traffic, and visual blight.” Siwik Decl. ¶ 10, at 4. Siwik states that she “personally hiked on the site of the proposed Foothills mine on February 5, 2023.” Siwik Decl. ¶ 11, at 4.

and a full-grown adult usually weighs about 20 to 40 kg (44 to 88 lb). They represent the closest relatives of the family Suidae, which contains pigs and relatives. Together Tayassuidae and Suidae are grouped in the suborder Suina within the order Artiodactyla (even-toed ungulates).

Peccary, Wikipedia, <https://en.wikipedia.org/wiki/Peccary> (last visited August 3, 2024).

Joseph A. Zupan represents that he is a member of Amigos Bravos and that he has “been a member for over eight years.” Declaration of Joseph A. Zupan in Support of Plaintiffs’ Opening Brief ¶ 2, at 2 (executed February 16, 2023), filed February 21, 2023 (Doc. 47-4)(“Zupan Decl.”). Zupan states that he has “recently been exploring the Florida Mountain Wilderness Study Area, and most recently visited the area February 3-4, 2023.” Zupan Decl. ¶ 4, at 3. He also states that he has “explored the area where the 40-acre mine site was approved by BLM as well as the adjacent part of the WSA.” Zupan Decl. ¶ 5, at 3. Zupan represents that, on this visit, he “hiked, photographed, and enjoyed the peace and quiet of these lands.” Zupan Decl. ¶ 5, at 3. He states that “[a]ny disturbance” to this area will “negatively affect the lands at the site as well as the adjoining WSA, including to the peace and quiet and other aesthetic values and uses I enjoy, as well as to wildlife habitat.” Zupan Decl. ¶ 5, at 3. Zupan states that while he intends to continue to visit the proposed drilling site in the future:

If the operations approved by the BLM were allowed to begin, such as the drilling, blasting, truck traffic and other industrial operations, it would definitely end my use of the lands at and near the site. The point of going into the Florida Mountains is to enjoy the primitive recreation opportunities, solitude, and peace and quiet. The quiet reflection that is gained from being out there is of great value to me. The Project will ruin these values and my enjoyment of the area.

Zupan Decl. ¶ 7, at 3. Zupan states that his “uses are totally incompatible with the uses of the public lands at the site approved by the BLM.” Zupan Decl. ¶ 11, at 4. He also expresses his concern that, if the mine project is allowed to commence, “it would ruin any chance for members of future generations to experience what I have experienced.” Zupan Decl. ¶ 8, at 4.

PROCEDURAL BACKGROUND

This section outlines this litigation’s procedural context. The Court begins by discussing the Plaintiffs’ Initial Petition and related documents. The Court then describes the arguments made

in the Plaintiffs’ Brief; the Federal Defendants’ Response Brief on the Merits, filed April 28, 2023 (Doc. 51)(“Federal Defendants’ Brief”); the American Magnesium Response Brief on the Merits, filed May 12, 2023 (Doc. 52)(“American Magnesium Brief”); and the Plaintiffs’ Reply Brief on the Merits, filed June 5, 2023 (Doc. 53)(“Plaintiffs’ Reply”). The Court then describes the arguments made at the July 12, 2023, hearing, and outlines the post-hearing Plaintiffs’ Notice of New Agency Actions, filed November 3, 2023 (Doc. 55)(“Plaintiffs’ Notice”); American Magnesium Response to Plaintiffs’ Notice of New Agency Actions, filed November 13, 2023 (Doc. 56)(“American Magnesium Notice Response”); and the Federal Defendants’ Response to Plaintiffs’ Notice of New Agency Action, filed November 13, 2023 (Doc. 57)(“Federal Defendants’ Notice Response”).

1. The Initial Petition, the Response, the Amended Petition, the Motion to Intervene, and the Motion to Compel.

As noted above, the Plaintiffs initially brought suit, via the Initial Petition, on September 11, 2020. See Initial Petition at 1. The Plaintiffs, in the Initial Petition, assert five causes of action against the BLM, Cooke, and Wallace: (i) a violation of the FLPMA, for failing to prevent unnecessary and undue degradation of public resources and comply with public review requirements regarding their review and approval of the Mining Project, see Initial Petition ¶¶ 114-17, at 31; (ii) a NEPA violation for failing to analyze adequately the Mining Project’s direct, indirect, and cumulative impacts, see Initial Petition ¶¶ 118-21, at 31-32; (iii) a NEPA violation for failing to analyze adequately the relevant background conditions of the resources that the Mining Project may affect, see Initial Petition at ¶¶ 122-25, at 32; (iv) a NEPA violation for failing to adequately consider reasonable alternatives to the Mining Project, see Initial Petition ¶¶ 126-29, at 32-33; and (v) a NEPA violation for failing to analyze fully mitigation measures and their

effectiveness, see Initial Petition ¶¶ 130-33, at 33. All of these claims allege that the BLM, Childress, and Wallace’s relevant actions “are arbitrary, capricious, an abuse of discretion, not in accordance with law, without observance of procedure required by law, and in excess of statutory jurisdiction, authority, or limitations, within the meaning of the judicial review provisions of the APA . . . 5 U.S.C. §§ 701-706.” Initial Petition ¶ 117, at 31. See id. ¶ 121, at 32; id. ¶ 125, at 32; id. ¶ 129, at 33; id. ¶ 133, at 33. Accordingly, the Initial Petition states that “[t]his is a suit pursuant to the APA, FLPMA, NEPA, and the implementing regulations and policies of these laws,” and that jurisdiction “is conferred by 28 U.S.C. § 1331 (federal question), § 2201 (declaratory relief), and § 2202 (injunctive relief).” Initial Petition ¶ 12, at 5. In summarizing its general criticisms of the Mining Project in the Initial Petition, the Plaintiffs state that “BLM approved both extensive exploration drilling as well as the full-scale 20-year mine, yet admits that there is no plan or proposal to process the excavated minerals from the mine,” and that “BLM also admits that neither it nor the company know the extent of the purported ore body,” and that, “[i]n essence, BLM approved a full-scale mine with nowhere to go.” Initial Petition ¶ 10, at 4. The Plaintiffs also lament the “BLM’s decision to approve mining even before exploration has occurred.” Initial Petition ¶ 12, at 4.

The BLM, Childress, and Wallace answered the Initial Petition on November 16, 2020. See Federal Defendants’ Response to Plaintiffs’ Petition for Review of Agency Action, filed November 16, 2020 (Doc. 9)(“Federal Defendants’ Response”). The Federal Defendants note that, because this action is brought under the auspices of the APA, the “Plaintiffs appropriately initiated this litigation though a ‘Petition for Review,’ to which no ‘Answer’ is required under the Federal Rules of Civil Procedure, which are generally inapplicable.” Federal Defendants’ Response ¶ 5,

at 3 (source of quoted material not cited)(citing Forest Guardians v. U.S. Fish & Wildlife Serv., 611 F.3d 692, 702 n.12 (10th Cir. 2010)). Instead, the Federal Defendants state:

Federal Defendants deny all violations of federal law alleged in Plaintiffs' Petition and deny the allegations underlying Plaintiffs' claims that federal laws have been violated. In accordance with *Olenhouse*, [*v. Commodity Credit Corp.*, 42 F.3d 1560 (10th Cir. 1994)(Kane, J., sitting by designation),] the Parties should work to agree on a schedule for the filing of any motions to dismiss, followed by production of the Administrative Record and briefing on the merits of Plaintiffs' appeal from the challenged agency actions for any claims remaining after any motions to dismiss are resolved. *See, e.g., WildEarth Guardians [v. U.S. Forest Service]*, 668 F. Supp. 2d [1314,] 1323 [(D.N.M. 2009)(Browning, J.)](noting that the case was resolved on the merits based on briefing that "is consistent with the Federal Rules of Appellate Procedure" and the Court's scheduling order).

Federal Defendants' Response ¶ 6, at 4. Next, on January 11, 2021, the BLM, Cooke, and Wallace filed an Unopposed Motion for Stay of All Proceedings, filed January 11, 2021 (Doc. 13)("Motion for Stay"), which states that "[d]uring recent discussions between the Parties regarding the management of this case, BLM informed FOTF that BLM intends to withdraw the challenged Decision and issue a new Decision Record for the Project in 2021." Motion for Stay ¶ 3 at 2. Accordingly, "BLM believes that preparation of the administrative record, any challenges to that record, future briefing on the merits, and other litigation activities would not be an efficient use of resources and would not be in the parties', or this Court's, best interests." Motion for Stay ¶ 3 at 2. The Motion for Stay requests that the Court "enter an Order staying all proceedings in this matter until issuance of the new Decision Record, or for 120 days from the date of this Motion, whichever occurs first." Motion for Stay at 3. The Plaintiffs did not oppose the Motion, and the Court granted the Motion for Stay four days later. See Order Staying All Proceedings at 1, filed January 15, 2021 (Doc. 14).

On May 3, 2021, American Magnesium moved to intervene in this suit. See Motion for Partial Lift of Stay and Motion to Intervene, filed May 3, 2021 (Doc. 16)("MTI"). American

Magnesium states in the MTI that, under rule 24 of the Federal Rules of Civil Procedure, American Magnesium may intervene as a matter of right, because “American Magnesium, LLC . . . is the project proponent” of the Mining Project at issue in this case, and is “so situated that the decisions in this matter may, as a practical matter, impair or impede its ability to protect its interest in the mine project,” as American Magnesium “cannot move forward with the mine project without the approval of the BLM and the claims made in this matter by the Plaintiffs jeopardize the approval and authorization for the project that has already been issued by BLM.” MTI ¶ 4, at 2. Moreover, American Magnesium argues that its “interests in this matter are separate and distinct from those of the current Defendants in this matter,” because “[t]he existing Defendants are agencies and employees of the United States government and their interests in this matter are related to the regulatory process and the implementation of the applicable regulations and requirements, which are not the same as [American Magnesium]’s interests as the project proponent.” MTI ¶ 5, at 2. Neither the Plaintiffs nor the Federal Defendants took a position on the American Magnesium Motion to Intervene, see MTI ¶ 7, at 2, and the Court granted the American Magnesium Motion to Intervene. See Order Granting Motion for Partial Lift of Stay and Motion to Intervene, filed October 25, 2021 (Doc. 22).

In the meantime, the Plaintiffs filed their First Amended Petition for Review of Agency Action, filed June 9, 2021 (Doc. 18)(“Amended Petition”). In the Amended Petition, the Plaintiffs again emphasize that the “BLM approved both extensive exploration drilling (called ‘verification drilling’ in the 2021 DR, at 3) as well as the full-scale 30-year mine, yet admits that there is no plan or proposal to process the excavated minerals from the mine,” and that “[s]uch carte-blanche, cart-before-the-horse decision making is not permitted under FLPMA and BLM mining regulations, as well as NEPA,” Amended Petition ¶ 34, at 10. The Amended Petition also states

that, in the EA, BLM did not “fully consider all of the ‘direct, indirect, and cumulative impacts’ from the mine as well as all ‘reasonably foreseeable future actions,’” nor did it adequately review the reasonable alternatives to the Mining Project. Amended Petition ¶¶ 35-37, at 11. The Amended Petition brings the same five counts as the Plaintiffs forward in the Initial Petition: (i) a violation of the FLPMA, for failing to prevent unnecessary and undue degradation of public resources and to comply with public review requirements regarding their review and approval of the Mining Project, see Amended Petition ¶¶ 133-36, at 36; (ii) a NEPA violation for failing to analyze adequately the Mining Project’s direct, indirect, and cumulative impacts, see Amended Petition ¶¶ 137-40, at 37; (iii) a NEPA violation for failing to analyze adequately the relevant background conditions of the resources the Mining Project may affect, see Amended Petition ¶¶ 141-44, at 37; (iv) a NEPA violation for failing to consider adequately reasonable alternatives to the Mining Project, see Amended Petition ¶¶ 145-48, at 38; and (v) a NEPA violation for failing to analyze fully mitigation measures and their effectiveness, see Amended Petition ¶¶ 149-52, at 38. One substantive change in the Amended Petition -- when compared with the Initial Petition -- is that the Amended Petition challenges the legality of the Decision Record, which, as described above, was filed after the Initial Petition, see supra, at 69-71. The Initial Petition challenges the earlier Decision Record Letter. See supra, at 69-71. On June 23, 2021, the BLM, Cooke, and Wallace filed their response to the Amended Petition, which again states that, pursuant to Olenhouse v. Commodity Credit Corp., 42 F.3d 1560 (10th Cir. 1994)(Kane, J., sitting by designation)(“Olenhouse”), no “Answer” is required under the Federal Rules of Civil Procedure, but that the “Federal Defendants deny all violations of federal law alleged in Plaintiffs’ Amended Petition and deny the allegations underlying Plaintiffs’ claims that federal laws have been

violated.” See Federal Defendants’ Response to Plaintiffs’ Petition for Review of Agency Action ¶¶ 5-6, at 3-4, filed June 23, 2021 (Doc. 19).

After the Court entered its Order granting Parties’ Joint Proposed Schedule, filed October 22, 2021 (Doc. 21), the parties began the process of administrative record production. On December 8, 2021, the Plaintiffs filed their Plaintiffs’ Motion to Compel Production of a Complete Administrative Record, filed December 8, 2021 (Doc. 26)(“Motion to Compel”). The Motion to Compel’s crux is a request that the Defendants in this matter “complete the Administrative Record (AR) with documents the Federal Defendants admit were excluded from the AR that it submitted to this Court and the parties.” Motion to Compel at 1. More specifically, the Court had to determine whether the Defendants must produce as part of the administrative record certain documents they have demarcated as deliberative. See Plaintiffs’ Memorandum in Support of Their Motion to Compel Production of a Complete Administrative Record at 2, 5-9, filed December 8, 2021 (Doc. 26-1). After holding a hearing on the Motion to Compel in July, 2022, see Clerk’s Minutes at 1, filed July 6, 2022 (Doc. 40), the Court entered an order granting in part and denying in part the Motion to Compel, and ordering the Defendants to create a log of withheld documents, see Order, filed September 29, 2022 (Doc. 42). In early 2023, the parties stipulated “certain matters regarding the Administrative Record in this case,” including that the “Federal Defendants will supplement the Administrative Record with 40 documents from the log and will file a notice certifying the complete Administrative Record by January 13, 2023,” and the fact that the “Federal Defendants have disclosed to the parties all documents on the log not subject to privilege (and excluding documents that Plaintiffs do not dispute).” Joint Stipulation on the Administrative Record and Motion to Revise Briefing Schedule at 1-2, filed January 10, 2023 (Doc. 44)(“Administrative Record Stipulation”). Moreover, the parties stipulated that “[f]or

documents that were disclosed to the parties but not supplemented to the Administrative Record, Federal Defendants stipulate that any party may rely on and include such documents as extra-record materials in support of their briefing on the merits.” Administrative Record Stipulation at 2.

2. The Merits Briefing.

The merits briefing is comprised of four briefs. First is the Plaintiffs’ Brief, followed by Federal Defendants’ Brief, the American Magnesium Brief, and the Plaintiffs’ Reply. The Court discusses each in turn.

a. The Plaintiffs’ Brief.

Pursuant to the Court’s briefing schedule, see Order, filed February 6, 2023, the Plaintiffs’ filed their Plaintiffs’ Brief on February 21, 2023, see Plaintiffs’ Brief at 1.³⁴ At the outset, the Plaintiffs emphasize that their challenge is to the 2021 Decision Record -- not the 2020 Decision Record Letter -- as well as to the “BLM’s underlying Environmental Assessment (EA), AR 000014-000099, and Finding of No Significant Impact (FONSI), AR 000002-000013.” Plaintiffs’ Brief at 9. The Plaintiffs’ Brief characterizes the Mining Project as vast and disruptive, stating that it would “conduct extensive exploration drilling, blast and excavate a large open mine pit, build a new road across public land, and construct and operate additional industrial infrastructure on public land in the Florida Mountains south of Deming and at an as-yet unidentified processing facility north of the town.” Plaintiffs’ Brief at 9. The Plaintiffs again emphasize that, “[b]efore any mining begins,” the Decision Record authorizes American Magnesium to “conduct an

³⁴The internal pagination in the Plaintiffs’ Brief is different from the CM/ECF pagination found in blue font at the top of each page of the filed copy. For consistency’s sake, the Court refers to the pages of the Plaintiffs’ Brief using the CM/ECF page numbers.

extensive ‘resource verification drilling’ (i.e. mineral exploration) program to determine the nature of the dolomite ore body,” Plaintiffs’ Brief at 9 (source of quoted material not cited), and also that American magnesium “never submitted an application or plan” for its off-site Processing Mill, Plaintiffs’ Brief at 10. The Plaintiffs also highlight the natural beauty of the area in which the Mining Project would take place:

The project would lie at the western edge of the Florida Mountains, which are located in Luna County approximately 12 miles southeast of Deming. This mountain range is characterized by spectacular jagged spires and multicolored cliffs of granite overlain in places by limestone. These rugged mountains rise more than 2,800 feet above the surrounding desert to an elevation of 7,448 feet at Florida Peak and dominate the landscape for miles around. Gently sloping alluvial fans radiate out from the higher terrain.

Plaintiffs’ Brief at 10. After these introductory facts, the Plaintiffs’ Brief discusses the Plaintiffs’ standing to sue, the applicable standard of review, and three main argument sections: (i) the Plaintiffs’ NEPA-related claims; (ii) the Plaintiffs’ FLPMA-related claims; and (iii) the Plaintiffs’ request for relief -- specifically, vacatur of the unlawful agency actions. The Court discusses each in turn.

i. The Plaintiffs’ Standing and the Applicable Standard of Review.

The Plaintiffs assert that they are proper parties to bring this lawsuit, according to Article III’s standing requirements, because “their members have suffered, and will continue to suffer, injuries in fact that are fairly traceable to, and would thus be redressed by invalidation of, BLM actions in this case.” Plaintiffs’ Brief at 17 (citing Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., Inc., 528 U.S. 167, 180-81, 183 (2000); Sierra Club v. U.S. Dep’t of Energy, 287 F.3d 1256, 1264-65 (10th Cir. 2002)). For injury-in-fact, the Plaintiffs state that it is their burden to

show that (1) “in making its decision without following [NEPA’s] procedures, the agency created an increased risk of actual, threatened, or imminent environmental harm,” and (2) “the increased risk of environmental harm injures [Plaintiffs’

members’] concrete interests by demonstrating either [their] geographical nexus to, or actual use of the site of the agency action.”

Plaintiffs’ Brief at 18 (quoting Comm. to Save the Rio Hondo v. Lucero, 102 F.3d 445, 449 (10th Cir. 1996))(all brackets in Plaintiffs’ Brief). The Plaintiffs assert:

Plaintiffs’ members are directly harmed by BLM’s decision approving the Project. The mine, drilling, road construction and traffic, mill, and associated infrastructure would adversely affect the lands where Plaintiffs’ members have enjoyed, and intend to continue enjoying in the coming months and years, a variety of activities including camping, hiking, photographing natural desert beauty, appreciating the solitude and peace and quiet of the affected lands, and viewing wildlife in the area.

Plaintiffs’ Brief at 18. As for traceability, the Plaintiffs assert that, in NEPA cases, “a ‘plaintiff need only trace the risk of harm to the agency’s alleged failure to follow [NEPA’s] procedures,’” and, here, the “Plaintiffs’ members’ injuries can be traced to BLM’s failure to take a hard look at the Project’s impacts to the landscape, air, wildlife, and other affected resources.” Plaintiffs’ Brief at 18 (quoting Comm. to Save the Rio Hondo v. Lucero, 102 F.3d at 452). Last, the Plaintiffs argue that their members’ injuries would be redressed by a favorable decision by the Court because, “in addition to preventing the Project’s impacts to Plaintiffs’ members, BLM would be made to properly analyze the full impacts of the Project under NEPA and FLPMA, and provide additional opportunities for public involvement in its decisionmaking process,” which might lead to a denial of the Mining Project proposal or “modifications that would lessen the Project’s environmental impacts.” Plaintiffs’ Brief at 18 (citing Comm. to Save the Rio Hondo v. Lucero, 102 F.3d at 452).

As for the applicable standard of review, the Plaintiffs note that “violations of NEPA and FLPMA at issue here are reviewed under the Administrative Procedure Act,” and thus the APA’s general scope of review statute, 5 U.S.C. § 706, governs. Plaintiffs’ Brief at 19. As the Plaintiffs

note, this statute states that “[a] court ‘shall . . . hold unlawful and set aside agency action, findings, and conclusions found to be: (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; [or] . . . (D) without observance of procedures required by law.’” Plaintiffs’ Brief at 19 (quoting 5 U.S.C. § 706(2)). In making this determination, the Plaintiffs state, the Court reviews the BLM’s decisions *de novo*, which requires a “‘thorough, probing, and in-depth review’ of the administrative record.” Plaintiffs’ Brief at 19 (quoting Wyoming v. United States, 279 F.3d 1214, 1238 (10th Cir. 2002)(Baldock, J.)).

The Plaintiffs contend, citing Tenth Circuit case law, that the relevant inquiry of this review requires the Court to “‘ascertain whether the agency examined the relevant data and articulated a rational connection between the facts found and the decision made. In reviewing the agency’s explanation, the reviewing court must determine whether the agency considered all relevant factors and whether there has been a clear error of judgment.’” Plaintiffs’ Brief at 19 (quoting Olenhouse v. Commodity Credit Corp., 42 F.3d at 1574).

ii. The Plaintiffs’ NEPA-Related Claims.

The Plaintiffs begin by outlining the legal framework which they contend governs their NEPA claims. They state that Congress enacted the NEPA “to promote government efforts ‘which will prevent or eliminate damage to the environment.’” Plaintiffs’ Brief at 21 (quoting 42 U.S.C. § 4321). To protect the environment, the “NEPA has two primary aims”:

First, it obligates federal agencies “to consider every significant aspect of the environmental impact of a proposed action.” *Utah Shared Access All. v. U.S. Forest Serv.*, 288 F.3d 1205, 1207 (10th Cir. 2002) (quoting *Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council*, 462 U.S. 87, 97 (1983)). Second, it “ensures that an agency will inform the public that it has considered environmental concerns in its decision-making process.” *Id.* “Simply by focusing the agency’s attention on the environmental consequences of a proposed project, NEPA ensures that important effects will not be overlooked or underestimated only to be discovered after

resources have been committed or the die otherwise cast.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

Plaintiffs’ Brief at 22. The Plaintiffs contend that the consideration aspect of NEPA requires “all Federal agencies to take a ‘hard look’ at the environmental impacts of their decisions before the decision is made.” Plaintiffs’ Brief at 22 (citing 42 U.S.C. § 4332(2)(C); *Robertson v. Methow Valley Citizens Council*, 490 U.S. at 349-50). A “hard look,” according to the Plaintiffs, “must utilize ‘public comment and the best available scientific information,’” Plaintiffs’ Brief at 22 (quoting *Colorado Env’t Coal. v. Dombeck*, 185 F.3d 1162, 1171 (10th Cir. 1999)), and cannot rely on “[c]onclusory statements regarding impacts without adequate discussion,” Plaintiffs’ Brief at 22.

The Plaintiffs also state that the “Council on Environmental Quality (CEQ) promulgated uniform regulations to implement NEPA, which are binding on all federal agencies,” Plaintiffs’ Brief at 22 (citing 40 C.F.R. Part 1500), and also that the BLM and the Department of the Interior’s NEPA regulations and policies “are also binding upon BLM,” Plaintiffs’ Brief at 22. The Plaintiffs note that although the Council on Environmental Quality revised its NEPA regulations in 2020, “[b]ecause BLM conducted its NEPA review for this project before the new regulations became effective . . . the CEQ NEPA regulations existing prior to September 14, 2020 (issued in 1978), at 40 C.F.R. Part 1500, apply to the project and this Court’s review.” Plaintiffs’ Brief at 22-23 n.4.

According to the Plaintiffs, this “hard look” is assessed on the basis of a statutorily required “‘detailed statement’ [which agencies must prepare] for all ‘major Federal actions significantly affecting the quality of the human environment.’” Plaintiffs’ Brief at 22 (quoting 42 U.S.C. § 4332(2)(C)). The first such “detailed statement,” 42 U.S.C. § 4332(2)(C), the Plaintiffs explain, is an Environment Assessment, which leads either to an “environmental impact statement (EIS),”

Plaintiffs’ Brief at 23 (citing 40 C.F.R. § 1501.4(c)), or to a Finding of No Significant Impact, which is issued if the “agency determines based on the EA not to prepare an EIS,” Plaintiffs’ Brief at 23. The Plaintiffs assert that a court reviewing the decision to issue a Finding of No Significant Impact “must determine ‘whether the agency acted arbitrarily and capriciously in concluding that the proposed action will not have a significant effect on the human environment.’” Plaintiffs’ Brief at 23 (quoting Davis v. Mineta, 302 F.3d 1104, 1112 (10th Cir. 2002)). The Plaintiffs generally state:

An EA must include a full and adequate analysis of environmental impacts of a project and its alternatives and must also include a “hard look” at the direct, indirect, and cumulative impacts of the project and its alternatives, resulting from all past, present, and reasonably foreseeable future actions. 40 C.F.R. §§ 1508.7, 1508.8, 1508.9, 1508.25(c). NEPA requires that “environmental information is available to public officials and citizens before decisions are made and before actions are taken.” 40 C.F.R. § 1500.1(b).

Plaintiffs’ Brief at 23. An “effect, or impact,” according to the Plaintiffs, “includes ecological . . . , aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative.” Plaintiffs’ Brief at 23 (quoting 40 C.F.R. § 1500.1(b)). The Plaintiffs also state that NEPA requires that “the agency analyze the current baseline conditions of the areas that may be affected by the project or its alternatives,” and cites 40 C.F.R. § 1502.15 as the basis for this requirement. Plaintiffs’ Brief at 23. Quoting the United States Court of Appeals for the Ninth Circuit, the Plaintiffs state: “Without establishing the baseline conditions . . . there is simply no way to determine what effect the [action] will have on the environment, and consequently, no way to comply with NEPA.” Plaintiffs’ Brief at 24 (quoting Half Moon Bay Fishermans’ Mktg. Ass’n v. Carlucci, 857 F.2d 505, 510 (9th Cir. 1988))(brackets in Plaintiffs’ Brief, but not in Half Moon Bay Fishermans’ Mktg. Ass’n v. Carlucci).

Additionally, the Plaintiffs emphasize that “[a]gencies must also ‘study, develop and describe appropriate alternatives,’ including a no action alternative.” Plaintiffs’ Brief at 24 (mistakenly quoting 42 U.S.C. § 4332(E), but quoted material found in 42 U.S.C. § 4332(F)). This requirement is related to the baseline conditions requirement, the Plaintiffs contend, because “[i]n general, NEPA analysis uses a no-action alternative as a baseline for measuring the effects of the proposed action.” Plaintiffs’ Brief at 24 (quoting Biodiversity Conservation All. v. U.S. Forest Serv., 765 F.3d 1264, 1269 (10th Cir. 2014)). The Plaintiffs assert that, “[i]n its alternatives analysis, the agency must ‘present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public.’” Plaintiffs’ Brief at 24 (quoting 40 C.F.R. § 1502.14). This task, according to the Plaintiffs, requires “the agency to ‘[d]evote substantial treatment to each alternative considered in detail . . . so that reviewers may evaluate their comparative merits.’” Plaintiffs’ Brief at 24 (quoting 40 C.F.R. § 1502.14(b)).

As for the necessity of discussing mitigation measures, the Plaintiffs state that agencies must “fully analyze all mitigation measures, their effectiveness, and any impacts that might result from their implementation,” Plaintiffs’ Brief at 24, and that “[a]ll relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies” Plaintiffs’ Brief at 25 (quoting Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026, 18,031 (March 23, 1981)). The Plaintiffs conclude their legal background concerning NEPA by stating that, “[o]verall, a failure to conduct a NEPA-compliant EA renders the resulting FONSI necessarily inadequate and illegal under NEPA.” Plaintiffs’ Brief at 25 (citing Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin., 508 F.3d 508, 557 (9th Cir. 2007)),

opinion vacated and superseded on denial of reh'g, 538 F.3d 1172 (9th Cir. 2008); Colorado Wild Horse v. Jewell, 130 F. Supp. 3d 205, 215 (D.D.C. 2015)(Cooper, J.)).

After outlining this legal framework, the Plaintiffs forward their NEPA-related legal arguments. Their leading argument is that the BLM violated the NEPA by failing to analyze the impacts of the Mining Project's off-site Processing Mill. See Plaintiffs' Brief at 26-33. This argument's crux is summed up at the outset:

BLM approved the full-scale mining project without knowing critical details about the mill that will be essential to process the ore from the mine. The mill is necessarily part of the proposed action. Without a mill to process the ore, there could be no viable mine. Yet, under NEPA, BLM cannot ignore the obvious and certain indirect and cumulative impacts from this reasonably foreseeable, indeed necessary for the mine to be viable, action.

Plaintiffs' Brief at 26. The Plaintiffs note that the EA contains very little concrete details about the Processing Mill; notably there is no actual site -- only general references to the Peru Industrial Site north of Deming -- nor have permits been obtained, or information on the conceptual mill's "environmental impacts, baseline conditions, and other critical information." Plaintiffs' Brief at 26. The Plaintiffs states that this lack of detail is problematic, because, under the NEPA, the "BLM must analyze the environmental consequences of such 'reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.'" Plaintiffs' Brief at 26 (quoting Colorado Env't Coal. v. Dombeck, 185 F.3d at 1176). Moreover, the Plaintiffs state that the "Department of the Interior and BLM have adopted their own regulations to supplement CEQ's NEPA regulations," and such regulations "require analysis of the cumulative impacts from all reasonably foreseeable actions." Plaintiffs' Brief at 28.

Here, the Plaintiffs note, the BLM initially brought up the fact that American Magnesium's plans for the off-site Process Mill were too vague to comply with the NEPA's mandates. See

Plaintiffs' Brief at 28-29, 30. For example, the Plaintiffs quote from BLM's correspondence with American Magnesium from 2017, during which -- as noted above, see Factual Background, supra, at 16 -- BLM expressed concern about the uncertainty around the Processing Mill: In a letter sent in December, 2017, the BLM states that the PO indicates that "the Peru Industrial Site might be the location for ore processing," but that, "[b]efore the BLM can issue a decision on the Plan, a definitive location must be determined in order for the BLM to complete a National Environmental Policy Act analysis on the Plan." See December 2017 Letter ¶ 11, at 2 (AR 0000004580). The Plaintiffs also cite to an internal BLM email from June, 2017, which states: "Note that the BLM would need certain information for the operations on non-Federal land to complete the required NEPA analysis for the project." Plaintiffs' Brief at 28 (quoting Email from Kenneth Gardner, cc'd Anthony Bates, Leighandra Neeven, Ida Viarreal, William Auby, Re: Foothills Dolomite quarry (magnesium project); status (dated June 27, 2017), filed February 21, 2023 (Doc. 47-7)). The Plaintiffs also point to indications in the record which suggest that American Magnesium also agreed that greater detail regarding the Process Mill was required by the NEPA: In an August, 2019, internal Information/Briefing Memorandum for the New Mexico State Director of the BLM, the BLM states that American Magnesium "'agreed the mill site needed to be included in the NEPA analysis,'" but then later "'informed BLM they had been advised not to share the mill site details, and asked BLM to move forward with drafting the EA without it.'" Plaintiffs' Brief at 30 (quoting 2019 BLM Memo. at 1).

The Plaintiffs argue that, despite these early misgivings about the vagaries of the off-site mill plan, the BLM ultimately acquiesced to American Magnesium's desire not to share the mill site details. See Plaintiffs' Brief at 30. The Plaintiffs state that the "BLM did not explain the reason for its change in its previous position that the agency needed to include a review of the

mill's impacts in its EA in order to comply with NEPA and FLPMA.” Plaintiffs’ Brief at 30. In any event, the Plaintiffs state:

[T]he record contains no details of the milling and its impacts, including of the site conditions, of the air and water pollution from the mill, of the waste dumping and byproducts from the milling, of the sources of water needed for the mill (and impacts from water withdrawals in the area), and of impacts to the Deming communities that will bear the brunt of the ore hauling and industrial truck traffic.

Plaintiffs’ Brief at 29. Instead, according to the Plaintiffs, American Magnesium “[a]t most” provided “an estimate, with no detailed analysis in support, of the annual water usage (17 million gallons), electricity and natural gas usage, and greenhouse gas emissions (but no estimates of emissions of the Clean Air Act Criteria pollutants from the mill and truck traffic).” Plaintiffs’ Brief at 29 (citing AM October 2019 Letter). This “meager information,” according to the Plaintiffs, was then “reprinted in the EA without further analysis of foreseeable impacts.” Plaintiffs’ Brief at 30 (citing EA at 22 (AR 0000000038)).

The Plaintiffs allege that this conduct is an unlawful dereliction of the BLM’s “duty” or “obligation” under the NEPA because it manifests a failure on the part of the BLM to adequately review the indirect or cumulative impacts from the Processing Mill. Plaintiffs’ Brief at 29 (citing Great Basin Mine Watch et al., GFS(MIN) 1A(1999) (Nov. 9, 1998)). According to the Plaintiffs, federal courts have “regularly faulted BLM for the same failure to review the indirect or cumulative impacts from mineral processing facilities when approving the mine that will produce ore for the mill.” Plaintiffs’ Brief at 31 (citing Ctr. for Biological Diversity v. United States Bureau of Land Mgmt., No. CIV 21-0182, 2023 WL 387609, at *4-7 (D. Idaho January 24, 2023)(Winmill, J.), appeal dismissed sub nom. Ctr. for Biological Diversity v. Bureau of Land Mgmt., No. 23-2810, 2023 WL 11055085 (9th Cir. October 26, 2023); S. Fork Band Council Of W. Shoshone of Nev. v. U.S. Dep’t of Interior, 588 F.3d 718, 726 (9th Cir. 2009)(per curiam)). Anticipating the

BLM's possible arguments, the Plaintiffs state that "[t]he fact that the necessary mill would not be on BLM-managed public land does not mean that BLM can simply ignore its own requirements or fail to review the impacts from, and alternatives to, the processing facilities," because "[c]umulative impacts must be reviewed 'regardless of what agency (Federal or non-Federal) or person undertakes such other actions.'" Plaintiffs' Brief at 31 (quoting 40 C.F.R. § 1508.7). Moreover, the Plaintiffs also reject the possible argument that the BLM's environmental obligations would be safe-guarded by the state and local permitting processes. According to the Plaintiffs,

Although various other permits would regulate the substantive environmental impacts on private lands (e.g., water and air pollution from the mill), BLM has a separate duty under NEPA to fully analyze these impacts and cannot defer to some future review by another agency, especially when NEPA does not apply to that agency (the case with state agencies).

Plaintiffs' Brief at 32.

The Plaintiffs' second NEPA-related argument is that the BLM violated the NEPA by failing to consider and analyze all reasonable alternatives in its approval of the Mining Project. See Plaintiffs' Brief at 33-35. More specifically, in this argument, the Plaintiffs argue that the BLM fails to consider fully the possible alternative of just approving the exploration -- the "resource verification" -- instead of approving the exploration and potential future mining at the same time. See Plaintiffs' Brief at 33; Factual Background, supra, at 17-19. The Plaintiffs also note that "BLM also briefly considered, but quickly rejected, alternative ore-hauling routes through Deming." Plaintiffs' Brief at 33 (citing EA at 23 (AR 0000000039)).

The Plaintiffs note that, in their comments to the BLM, they "specifically requested that BLM review the reasonable alternative that the agency only consider the exploration at this time." Plaintiffs' Brief at 33 (citing Draft EA Comments Letter at 28 (AR 0000007719)). They state that,

despite this request, “BLM refused, without explanation, to consider Plaintiffs’ proffered alternative, despite the fact that AM and BLM considered the exploration operations separate and distinct from the later mining,” and despite that, in the Final PO, American Magnesium acknowledged that the mining is predicated on the results of the resource verification: “[I]f mining operations do not begin within 1 year of the end of verification drilling, AmMg will reclaim the disturbances related to the verification drilling program.” Plaintiffs’ Brief at 33 (quoting Final PO at 13 (AR 0000005657)). In addition, related to the Processing Mill, the Plaintiffs also argue that, in an earlier internal memorandum, the BLM considered “material transportation to mill sites in Canada, South America, Europe or Asia,” but that the BLM never analyzed that alternative in the EA. Plaintiffs’ Brief at 34 (quoting 2019 BLM Memo. at 3).

The Plaintiffs acknowledge that the BLM need not “consider all possible alternatives for a given action in preparing an EA,” but assert that “it must consider a range of alternatives that covers the full spectrum of possibilities.” Plaintiffs’ Brief at 34 (quoting Ayers v. Espy, 873 F. Supp. 455, 473 (D. Colo. 1994)(Babcock, J.)). They state that the “NEPA requires the agency to ‘study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources,’” Plaintiffs’ Brief at 34 (quoting 42 U.S.C. § 4332(E)), and that this process requires the agency to “‘rigorously explore and objectively evaluate all reasonable alternatives’ to the proposed action,” Plaintiffs’ Brief at 34 (quoting 40 C.F.R. § 1502.14(a)). According to this standard, the Plaintiffs argue that the BLM failed to fulfill its obligations under the NEPA.

As its last NEPA-related argument, the Plaintiffs contends that the BLM failed to analyze adequately the baseline conditions of the area-to-be-affected by the Mining Project. The Plaintiffs contend that the regulations require BLM to “describe the environment of the area(s) to be

affected or created by the alternatives under consideration,” Plaintiffs’ Brief at 35 (quoting 40 C.F.R. § 1502.15), but that the “BLM failed to fully analyze baseline conditions for the critical water, air, wildlife, and other resources that will be adversely affected by the Project,” Plaintiffs’ Brief at 35. As for air quality, the Plaintiffs state that BLM did not “analyze the baseline conditions of Criteria Pollutants under the federal Clean Air Act such as CO, VOCs, Ozone, SO₂, NO_x (i.e., BLM only looked at the current particulate matter (PM) levels in the area) -- all pollutants that will be emitted from the exploration, mining, transportation, and processing of the minerals.” Plaintiffs’ Brief at 35. They also critique the BLM’s inadequate assessment of how the Mining Project would affect the baseline condition of migratory birds in the area. See Plaintiffs’ Brief at 35-36. The Plaintiffs argue that the “BLM cannot rely on such future mitigation measures to avoid collecting and analyzing the required baseline information/data,” in part because “[m]itigation measures are an insufficient proxy for adequate baseline data because they do not further either of the twin aims of NEPA.” Plaintiffs’ Brief at 36 (citing N. Plains Res. Council, Inc. v. Surface Transp. Bd., 668 F.3d 1067, 1072 (9th Cir. 2011)). In addition, the Plaintiffs contend that the BLM’s baseline assessment of the wildlife in the area is insufficient because it focuses only on wildlife within the Mining Project’s area. See Plaintiffs’ Brief at 37. The Plaintiffs assert that, “[n]ot only does this ignore the impacts from the transport and processing of the minerals as noted herein, but also the obvious fact that impacts will be felt by wildlife outside the 40 acres (e.g., migration, travel, noise/air/visual/etc. impacts).” Plaintiffs’ Brief at 37 (citing Utahns for Better Transp. v. U.S. Dep’t of Transp., 305 F.3d 1152, 1179-80 (10th Cir. 2002), as modified on reh’g, 319 F.3d 1207 (10th Cir. 2003)).

iii. The Plaintiffs' FLPMA-Related Claims.

As in the previous section of the Plaintiffs' Brief, the Plaintiffs begin by outlining the legal framework which they assert governs their FLPMA claims. See Plaintiffs' Brief at 38. Quoting the statute, the Plaintiffs state that the FLMPA "requires that, '[i]n managing the public lands the Secretary [of Interior] shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands.'" Plaintiffs' Brief at 38 (quoting 43 U.S.C. § 1732(b))(brackets in Plaintiffs' Brief). This mandate to prevent undue degradation, which the Plaintiffs characterize as a "duty," is, accordingly to the Plaintiffs, "'the heart of FLPMA [that] amends and supersedes the Mining Law.'" Plaintiffs' Brief at 38 (quoting Min. Pol'y Ctr. v. Norton, 292 F. Supp. 2d 30, 33 (D.D.C. 2003)). The Plaintiffs contend that the "BLM complies with this mandate 'by exercising case-by-case discretion to protect the environment through the process of: (1) approving or rejecting individual mining plans of operation.'" Plaintiffs' Brief at 38 (quoting Ctr. for Biological Diversity v. U.S. Dep't of Interior, 623 F.3d 633, 645 (9th Cir. 2010)(Fletcher, J.)). As part of its duty to prevent unnecessary or undue degradation of the lands, the Plaintiffs assert, the "BLM must ensure that all operations comply with the Performance Standards found at 43 C.F.R. § 3809.420." Plaintiffs' Brief at 38 (citing 43 C.F.R. § 3809.5).

After outlining this legal background, the Plaintiffs forward their two FLPMA claims. See Plaintiffs' Brief at 38-44. First, the Plaintiffs argue that the BLM's approval of the resource verification and the mining at the same time violates the FLPMA "which requires that at most, BLM can only consider an alternative of authorizing the exploration aspect of the project to ascertain the nature and extent of the deposit, and cannot consider or approve the entire open pit mineral extraction operations until the agency obtains that evidence." Plaintiffs' Brief at 38-39. As a legal basis for this contention, the Plaintiffs state that the "BLM requires that all mineral

operations follow the ‘Performance Standards’ at 43 C.F.R. § 3809.420,” which “includes the requirement that BLM review and approve operations in the logical sequence of operations -- where exploration is a prerequisite of actual mining/excavation/processing.” Plaintiffs’ Brief at 39 (citing Surface Management Handbook, BLM Handbook H-3809-1, United States Department of the Interior, Bureau of Land Management ¶ 5.2.2, at 93 (dated September 17, 2012), available at <https://www.blm.gov/sites/blm.gov/files/H-3809-1.pdf> (last visited July 10, 2024)) (“Surface Management Handbook”). In particular, the Plaintiffs cite to a passage of the Surface Management Handbook which states:

The operator must avoid unnecessary impacts and facilitate reclamation by following a reasonable and customary mineral exploration, development, mining, and reclamation sequence.¹ This performance standard is designed to prevent unnecessary impacts from operations that are conducted out of sequence with the reasonable and customary mineral exploration, development, mining, and reclamation cycle. (See also 43 CFR 3715.0-5, which defines “reasonably incident,” in part as, “using methods, structures, and equipment appropriate to the geological terrain, mineral deposit, and stage of development” (emphasis added).)

This standard is to be applied on a broad scale. For example, **an operation that proposes stripping soil from an area for mining purposes prior to even attempting to identify the presence of a mineral deposit using standard industry practices would not meet this performance standard.**

Plaintiffs’ Brief at 39 (quoting Surface Management Handbook ¶ 5.2.2, at 93)(emphasis in Plaintiffs’ Brief, but not in Surface Management Handbook). The Plaintiffs contend that BLM would not meet this performance standard, as BLM in this case approved the full Mining Project “prior to even attempting to identify the presence of a mineral deposit using standard industry practices.” Plaintiffs’ Brief at 39 (quoting Surface Management Handbook ¶ 5.2.2, at 93). According to the Plaintiffs, this decision violates the BLM’s duty to prevent unnecessary or undue

degradation “under 43 U.S.C. § 1732(b) and the mandatory ‘performance standards’ at 43 C.F.R. § 3809.420.” Plaintiffs’ Brief at 40.

The Plaintiffs characterize the BLM’s conduct in this case as a “significant departure from its regulations and accepted practice,” and point to statements in the September 2018 PO which indicate that American Magnesium itself has no “real evidence about the resources at the site.” Plaintiffs’ Brief at 40. The September 2018 PO states, for example, that “[t]here is not sufficient information to estimate mineral resources for the deposit at this time.” Plaintiffs’ Brief at 40 (quoting September 2018 PO at 42 (AR 0000005045)). Because this statement comes from American Magnesium’s September 2018 PO, the Plaintiffs assert that BLM thus knew that “there had been no drilling or exploration at the site, outside of some very limited ‘chips’ taken from the immediate surface,” Plaintiffs’ Brief at 40 (source of quoted material not cited, but presumably September 2018 PO at 42 (AR 0000005045)), and thus the “BLM cannot credibly estimate mineral reserves or resources, approve products to be mined and processed, approve open pit operations, and anticipate and mitigate environmental problems and approve a reclamation plan, when it has little or no knowledge of the deposit to be mined,” Plaintiffs’ Brief at 40.

Another aspect of the Plaintiffs’ first FLPMA argument is that BLM could not approve the full Mining Project before resource verification, because such an action would violate a statutory restriction that “approved operations are limited to the appropriate stage of development.” Plaintiffs’ Brief at 40. The Plaintiffs state that this restriction is rooted in a provision of the 1955 Surface Resources Act, 30 U.S.C. § 612(a), which states that mining claims “shall not be used . . . for any purposes other than prospecting, mining or processing operations and uses reasonably incident thereto.” 30 U.S.C. § 612(a). See Plaintiffs’ Brief at 40. To explain, and to

tether this restriction to the concept of unnecessary or undue degradation, the Plaintiffs again quote the BLM's Surface Management Handbook, which states:

Under the Surface Resources Act of 1955,¹ mining claims may not be used “for any purposes other than prospecting, mining or processing operations and uses reasonably incident thereto.” **Any activity that is not reasonably incident as defined in 43 CFR 3715.0-5 is by definition UUD within the meaning of 43 CFR 3809.5.**

Plaintiffs' Brief at 40 (quoting Surface Management Handbook ¶ 5.1.2, at 92)(emphasis in Plaintiffs' Brief, but not in Surface Management Handbook). The Plaintiffs state that the term “reasonably incident,” in this context means, “in part . . . ‘using methods, structures, and equipment appropriate to the geological terrain, mineral deposit, and *stage of development*.’” Plaintiffs' Brief at 41 (quoting Surface Management Handbook ¶ 5.2.2, at 93)(emphasis in Surface Management Handbook and the Plaintiffs' Brief). The Plaintiffs argue that the exploration-plus-mining approval does not comply with this mandate, because approval of a full mine is not reasonably incident to the appropriate stage of development of the mining claim. See Plaintiffs' Brief at 41. The Plaintiffs state, citing to an internal BLM correspondence, that the BLM knew that approving both the initial exploration and the full mining exploration would run afoul of the “reasonably incident” restriction:

[I]t does not appear the BLM can do more at present than evaluate/approve a plan of operations for an exploration drilling project. That is, the company would need to define a resource/reserve and complete the appropriate engineering design and background studies to produce a preliminary economic analysis and at least a pre-feasibility study for the project (open pit mine, conveyor and mill) before having the information necessary for a plan of operations involving the quarry that the BLM could evaluate/approve. **For the company to do otherwise would not appear to be a use reasonably incident to a mining claim per 30 USC 612(a).**

Plaintiffs' Brief at 41 (quoting Email from Kenneth Gardner, cc'd Anthony Bates, Leighandra Neeven, Ida Viarreal, William Auby, Re: Foothills Dolomite quarry (magnesium project); status

at 4 (dated June 27, 2017), filed February 21, 2023 (Doc. 47-7))(emphasis in Plaintiffs' Brief, but not in Email). The Plaintiffs also state, again citing an internal BLM email, that the BLM "questioned 'the appropriateness [of the approval] of a mine/mill before exploration.'" Plaintiffs' Brief at 41 (quoting Email from Kenneth Gardner to Leighandra Neeven and William Auby, cc'd Adam Merrill, Re: Foothills Dolomite quarry (magnesium project); status at 2 (dated June 28, 2017), filed February 21, 2023 (Doc. 47-8))(brackets in Plaintiffs' Brief, but not in email). The Plaintiffs' first FLMPA argument contends that exploration and mineral verification in this case could have feasibly been conducted "prior to proposing a full mining plan or even conducting impactful road building activities," which the Plaintiffs argue is true because American Magnesium's "consultant" advised the company that this was the case:

"RPA [AM's consultant] estimates that a diamond drilling program would yield sufficient information to qualify the MgO grade in Dolomite Mountain. A helicopter supported drill program would have the least amount of surficial impact, should American Magnesium not wish to pursue roads on the mountain at this stage of the evaluation."

Plaintiffs' Brief at 42 (quoting Draft Letter from RPA (USA) Ltd., Barton G. Stone, to David Tognoni, RE: Site Visit Report of Florida Mountains, New Mexico claims of American Magnesium LLLP at 17 (dated November 17, 2014)(AR 0000007741))(brackets in Plaintiffs' Brief but not in Draft Letter). The Plaintiffs state that the BLM "never considered this reasonable alternative." Plaintiffs' Brief at 42.

The second FLMPA argument which the Plaintiffs forward concerns the proposed Processing Mill, and alleges that the lack of details regarding this Processing Mill is contrary to the "BLM's FLPMA mining regulations," which require detailed information regarding "processing facilities." Plaintiffs' Brief at 43 (quoting 43 C.F.R. § 3809.401(b)(2)). Specifically, the regulation in question, 43 C.F.R. § 3809.401, states:

(a) If you are required to file a plan of operations under § 3809.11 . . .

(b) Your plan of operations must contain the following information and describe the proposed operations at a level of detail sufficient for BLM to determine that the plan of operations prevents unnecessary or undue degradation:

. . .

(2) ***Description of Operations.*** A description of the equipment, devices, or practices you propose to use during operations including, where applicable --

(i) Maps of the project area at an appropriate scale showing the location of exploration activities, drill sites, mining activities, **processing facilities**, waste rock and tailing disposal areas, **support facilities**, structures, buildings, and access routes;

(ii) Preliminary or conceptual designs, cross sections, and operating plans for mining areas, **processing facilities**, and waste rock and tailing disposal facilities;

. . . .

Plaintiffs' Brief at 43 (citing 43 C.F.R. § 3809.401). The Plaintiffs state that, because the BLM did not comply with this FLMPA regulation, it violates the FLMPA. See Plaintiffs' Brief at 43-44.

iv. **Request for Relief.**

The Plaintiffs request the Court to “vacate the 2021 DR, FONSI, and EA,” because “[v]acatur of BLM’s Project approval is the default remedy for NEPA and FLPMA violations.” Plaintiffs’ Brief at 45. The Plaintiffs acknowledge that “[t]he Tenth Circuit recently recognized a limited exception to the default APA standard vacatur remedy and adopted the *Allied-Signal* [v. U.S. Nuclear Regul. Comm’n, 988 F.2d 146, 150-51 (D.C. Cir. 1993)](“Allied-Signal”) test to determine whether to remand with or without vacatur.” Plaintiffs’ Brief at 46. The Plaintiffs

contend however, that the Allied-Signal test does not disturb the default vacatur remedy, because the BLM's NEPA and FLPMA violations in this case are serious, and the disruptive impact of vacatur of is limited and does not outweigh the harm to the plaintiffs. See Plaintiffs' Brief at 46-47.

b. The Federal Defendants' Brief.

The BLM, Beck, and Wallace ("the Federal Defendants") respond to the Plaintiffs' arguments. See Federal Defendants' Brief at 1. In outlining the standard of review that the Court should apply, the Federal Defendants emphasize the deference that the Court should afford to agency action in this context. See Federal Defendants' Brief at 15. They state that, under APA review, "a court affords an agency's decision 'a presumption of regularity,'" Federal Defendants' Brief at 15 (quoting Citizens to Pres. Overton Park, Inc. v. Volpe, 401 U.S. 402, 415 (1971), abrogated on other grounds by Califano v. Sanders, 430 U.S. 99 (1977)), and that "a court is not to substitute its judgment for that of the agency," Federal Defendants' Brief at 15 (quoting Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983)). The Federal Defendants state that the Court must "uphold an administrative action if the agency has 'considered the relevant factors and articulated a rational connection between the facts found and the choice made,'" Federal Defendants' Brief at 15 (quoting Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, 462 U.S. 87, 105 (1983)), and, that "[d]eference to the agency is especially strong where the challenged decisions involve technical or scientific matters within the agency's area of expertise,'" Federal Defendants' Brief at 15 (quoting Utah Env't Cong. v. Dale Bosworth, 443 F.3d 732, 739 (10th Cir. 2006)).

i. The NEPA-Related Arguments.

Next, the Federal Defendants move on to the Plaintiffs' NEPA-related arguments. See Federal Defendants' Brief at 16-31. First, they respond to the Plaintiffs' contention that the BLM violated the NEPA by failing to analyze the impacts of the Mining Project's off-site Processing Mill. See Plaintiffs' Brief at 26-33. Against this argument, the Federal Defendants state that the EA does not "ignore" the off-site Processing Mill its analysis. Federal Defendants' Brief at 16. Rather, they state that the "BLM acknowledged that the transportation and processing of the ore are indirect effects of the proposed action," and that the Plaintiffs' assertions that the record is bereft of details in the record regarding the off-site Processing Mill is "belied by that same record." Federal Defendants' Brief at 16.

To support this counter-argument, the Federal Defendants cite to: (i) the EA's analysis of "impacts to air quality and climate change from transportation and processing of the ore," Federal Defendants' Brief at 16 (citing EA at 37-45 (AR 0000000053-0000000061)); (ii) the EA's description of "the estimated water usage from the conceptual processing mill," Federal Defendants' Brief at 17 (citing EA at 22 (AR 0000000038)); (iii) the EA's description of the "traffic and public safety impacts" related to transportation of ore to the off-site Processing Mill, Federal Defendants' Brief at 17 (citing EA at 30-33 (AR 0000000046-0000000049)); (iv) the EA's analysis of the "cumulative traffic impacts" related to transportation of ore to the off-site Processing Mill, Federal Defendants' Brief at 17 (citing EA at 33 (AR 0000000049)); (v) the EA's "information on waste and byproducts from processing," Federal Defendants' Brief at 18 (citing EA at 48 (AR 0000000064)); (vi) the EA's "incorporat[ion] by reference [of] information on the site conditions of the Peru Industrial Park," Federal Defendants' Brief at 18 (citing Comprehensive Master Plan for the Peru Mill Industrial Park, City of Deming at cover page-back cover (dated

June, 2010)(AR 0000010489-0000010542)); and (vii) the information in the “2013 Feasibility Study for the conceptual processing mill, which was incorporated by reference in the EA,” Federal Defendants’ Brief at 18 (citing Conceptual Feasibility Report at cover page-64 (AR 0000004702-0000004776)).

Aside from these discussion and analyses, the Federal Defendants state that the “BLM did not conduct further detailed analysis of the impacts of the processing mill because no further details of the mill were known to BLM at the time, and still are not known,” Federal Defendants’ Brief at 18, and that the “BLM’s analysis of the impacts of the mill was sufficient given the level of detail available for the conceptual site and BLM was not required to speculate further about impacts from processing,” Federal Defendants’ Brief at 19. In support of this assertion, the Federal Defendants cite to a case from the United States District Court for the District of Colorado, which they state stands for the proposition that an “agency did not act arbitrarily and capriciously by declining to consider the effects of a proposed uranium mill ‘[b]ecause no formal proposal for constructing the mill had even been submitted to governmental permitting agencies at the time the EA was issued.’” Federal Defendants’ Brief at 19 (quoting Colorado Env’t Coal. v. Off. of Legacy Mgmt., 819 F. Supp. 2d 1193, 1211 (D. Colo. 2011)(Martínez, J.), amended on reconsideration, No. 08-CV-01624, 2012 WL 628547 (D. Colo. February 27, 2012)(Martínez, J.)).

The Federal Defendants also assert that the BLM was not “required to wait to approve the mine until American Magnesium had finalized its plans for processing the ore.” Federal Defendants’ Brief at 19. To support this proposition, the Federal Defendants cite and discuss three cases: (i) they reference State of Alaska v. Andrus, 580 F.2d 465, 473 (D.C. Cir.), vacated in part sub nom. W. Oil & Gas Ass’n v. Alaska, 439 U.S. 922 (1978), for the notion that “[s]ome element of speculation is implicit in NEPA’ and ‘agencies may not be precluded from proceeding with

particular projects merely because the environmental effects of that project remain to some extent speculative,” Federal Defendants’ Brief at 19 (quoting State of Alaska v. Andrus, 580 F.2d at 473); (ii) they reference Nat’l Indian Youth Council v. Andrus, 501 F. Supp. 649, 671 (D.N.M. 1980)(Campos, J.), aff’d sub nom. Nat’l Indian Youth Council v. Watt, 664 F.2d 220 (10th Cir. 1981), for the notion that “[i]t is the agency which must determine when it has gathered enough information to enable it to make its informed predictions and to proceed with the proposed action,” and also for the rule that “[o]nce the agency has made a determination that it has enough information to make its predictions and to proceed, the courts may not substitute their judgment for that of the decisionmaker and insist that the project be delayed while more information is sought,” Federal Defendants’ Brief at 19-20 (quoting Nat’l Indian Youth Council v. Andrus, 501 F. Supp. at 671); and (iii) they reference Jicarilla Apache Tribe of Indians v. Morton, 471 F.2d 1275, 1280 (9th Cir. 1973), which, the Federal Defendants assert, cautions that “if courts ‘were to impose a requirement that an impact statement can never be prepared until all relevant environmental effects were known, it is doubtful that any project could ever be initiated,” Federal Defendants’ Brief at 20 (quoting Jicarilla Apache Tribe of Indians v. Morton, 471 F.2d at 1280). On top of these principles, the Federal Defendants assert that the “Plaintiffs have not provided any evidence to show that the BLM failed to consider any relevant or significant impacts from transporting or processing the ore that would render its decision to approve the MPO arbitrary and capricious.” Federal Defendants’ Brief at 20.

The Federal Defendants also state that the reasonableness of the BLM’s action in this case is supported by the fact that “agencies with permitting authority will conduct further analysis before the mill is constructed.” Federal Defendants’ Brief at 20. They argue that, various State and local entities would need to issue permits for the off-site Processing Mill’s construction and

operation, and thus the BLM could “reasonably assume[]” that such activity would be viable. Federal Defendants’ Brief at 20. In support of this proposition, the Federal Defendants quote a case that the Honorable Alan Johnson, United States District Judge for the United States District Court for the District of Wyoming, authored, in which Judge Johnson notes that “[i]t is an unlikely case where analysis cannot be more thorough or based upon better modeling at some point in time, or simply more comprehensive,” and that, at the Environmental Impact Statement phase,

it is also important to recall that this is not the end of the activities that will be required for these projects to proceed. New air quality permits must be issued before the leased tracts may be mined. The future activities, if the lease is put up for a competitive sale, are subject to multiple considerations that will more than likely fill the analytical voids that the petitioners claim exist.

Federal Defendants’ Brief at 20 (quoting Wild Earth Guardians v. United States Forest Serv., 120 F. Supp. 3d 1237, 1265 (D. Wyo. 2015)(Johnson, J.), rev’d and remanded on others grounds sub nom. WildEarth Guardians v. United States Bureau of Land Mgmt., 870 F.3d 1222 (10th Cir. 2017)).

The Federal Defendants also criticize the Plaintiffs’ reliance on the internal BLM employee’s communications in an attempt to prove some change in position. See Federal Defendants’ Brief at 21-22 (citing Plaintiffs’ Brief at 28-29, 30). The Federal Defendants assert that “opinions expressed by employees lacking authority to bind the agency do not represent an agency’s ‘position.’” Federal Defendants’ Brief at 20-21 (source of quoted material not cited)(citing WildEarth Guardians v. Conner, 920 F.3d 1245, 1258 n.3 (10th Cir. 2019); WildEarth Guardians v. Nat’l Park Serv., 703 F.3d 1178, 1186-87 (10th Cir. 2013); Nat’l Ass’n of Home Builders v. Defs. of Wildlife, 551 U.S. 644, 658-59 (2007)). Moreover, even to the extent these communications can be relied upon, the Federal Defendants assert that any change in position indicated in these communications can be explained by the BLM’s 2018 Instruction Memo, see

Factual Background Section 1.b, supra, at 21-22, which the Federal Defendants contend represents an “agency-wide shift in policy during the relevant timeframe,” Federal Defendants’ Brief at 21. More specifically, the Federal Defendants aver that the Instruction Memo. “redefined ‘connected actions’ under NEPA to explicitly exclude non-Federal actions (like the processing mill here).” Federal Defendants’ Brief at 21-22 (source of quoted material not cited). As a result, the Federal Defendants assert that

while BLM initially believed it would require “detailed information” about the magnesium processing facility for its NEPA analysis, . . . it ultimately reasonably concluded that it would need only “some level of mill site details . . . pursuant to . . . [the Instruction Memo.] in order to conduct downstream analysis of Green House Gases, water impacts and transportation routes.”

Federal Defendants’ Brief at 22 (quoting Email from Kenneth Gardner to William Auby, cc’d Leighandra Neeven and, Re: Foothills Dolomite quarry/magnesium project, update (dated July 17, 2017), filed February 21, 2023 (Doc. 47-10); citing 2019 BLM Memo.).

As final responses to the Plaintiff’s first NEPA-related argument, the Federal Defendants state that, although the Plaintiffs contend that the BLM’s actions violate the agency’s “‘mining regulations,’” Federal Defendants’ Brief at 22 (quoting Plaintiffs’ Brief at 30), the Plaintiffs “do not cite any provision of those regulations setting forth any ‘duty to require’ American Magnesium to provide additional information on the mill, nor do Plaintiffs otherwise allege with any specificity how BLM failed to comply with those regulations by not requiring additional information.” Federal Defendants’ Brief at 22-23 (quoting Plaintiffs’ Brief at 30). Moreover, the Federal Defendants state that the Plaintiffs’ reliance on Ctr. for Biological Diversity v. United States Bureau of Land Mgmt., 2023 WL 387609, at *4-7 and S. Fork Band Council Of W. Shoshone Of Nevada v. U.S. Dep’t of Interior, 588 F.3d at 726, is misplaced, because in those cases “the agency had failed to consider the impacts from processing the ore *at all* because it reasoned that the

proposed mine would not increase the rate of processing at the existing plants and therefore would not alter the status quo,” whereas here, according to the Federal Defendants, the “BLM recognized that ore processing was an indirect effect that needed to be analyzed and did in fact analyze it,” Federal Defendants’ Brief at 23 (emphasis in Federal Defendants’ Brief). The Federal Defendants conclude their response to the Plaintiffs’ opening argument by accusing the Plaintiffs of trying to “to apply the more stringent analysis requirements of an Environmental Impact Statement (EIS) to the EA.” Federal Defendants’ Brief at 23. See id. at 23-24 (citing 40 C.F.R. § 1508.9; Utah Shared Access All. v. U.S. Forest Serv., 288 F.3d 1205, 1213 (10th Cir. 2002); Jarita Mesa Livestock Grazing Ass’n v. United States Forest Serv., 301 F. Supp. 3d 1010, 1030 (D.N.M. 2017)(Browning, J.)).

Next, the Federal Defendants address the Plaintiffs’ second NEPA-related argument, that the BLM violated the NEPA by failing to consider and analyze all reasonable alternatives in its approval of the Mining Project. See Plaintiffs’ Brief at 33-35; Federal Defendants’ Brief at 24-26. As discussed above, see Procedural Background Section 2.a.ii, supra, at 78-88, this argument’s core is that the BLM failed to consider fully the possible alternative of approving only the exploration -- the “resource verification” -- instead of approving the exploration and potential future mining at the same time. See Plaintiffs’ Brief at 33. To this argument, the Federal Defendants respond that there is “no reason for BLM to segment its NEPA analysis into separate exploration and development phases,” and that the “impacts from drilling are already analyzed in the EA and Plaintiffs have offered no legal authority supporting the notion that an agency’s environmental analysis was flawed because it analyzed multiple phases in a single alternative.” Federal Defendants’ Brief at 25. Moreover, the Federal Defendants state, there is no “practical reason to pull out the drilling as a separate alternative,” because “the mineral deposit is exposed at

the surface,” and thus the “BLM reasonably determined that additional exploration was not required to determine the presence of a mineral deposit.” Federal Defendants’ Brief at 25. The Federal Defendants again affirm that “[i]f American Magnesium drills and finds that the quantity and quality of the ore does not economically support extraction, then the mining will not occur.” Federal Defendants’ Brief at 25 (citing Rock Creek All. v. U.S. Forest Serv., 703 F. Supp. 2d 1152, 1175 (D. Mont. 2010)(Molloy, J.), aff’d in part sub nom. Rock Creek All. v. U.S. Fish & Wildlife Serv., 663 F.3d 439 (9th Cir. 2011), for the notion that “there is little practical difference between the Phase I alternative and the combined alternative because in both scenarios Phase II of the project can only occur after Phase I is complete”). Last, as it pertains to the Plaintiffs’ brief argument regarding alternative mill sites, see Procedural Background Section 2.a.ii, supra, at 81, the Federal Defendants state that the “Plaintiffs never raised that issue in their comments to the agency and so it is waived.” Federal Defendants’ Brief at 26 (citing Dep’t of Transp. v. Pub. Citizen, 541 U.S. 752, 764-65 (2004); Forest Guardians v. U.S. Forest Serv., 495 F.3d 1162, 1170 (10th Cir. 2007)).

The Federal Defendants then turn to the Plaintiffs’ third and final NEPA-related argument: the contention that the BLM failed to analyze adequately the baseline conditions of the area that the Mining Project affects. See Procedural Background Section 2.a.ii, supra, at 82-83. In response, the Federal Defendants state that the “BLM performed detailed evaluations of baseline environmental characteristics of the affected area,” including information on scenic qualities, water quality, air quality, recreational hunting, and the wilderness characteristics of the Florida Mountains. Federal Defendants’ Brief at 27 (citing EA at 25-65 (AR 0000000041-0000000081)). Specifically, the Federal Defendants state that, “[c]ontrary to Plaintiffs’ assertion, the BLM’s air quality analysis did contain baseline information about the cited criteria pollutants under the Clean

Air Act including CO, VOCs, Ozone, SO₂, NO_x, and two classes of particulate matter.” Federal Defendants’ Brief at 27 (citing EA at 39 (AR 0000000055)). The Federal Defendants concede that the main focus of the EA’s air quality analysis is dust, but contend that this focus is consistent with “the regulatory mandate that ‘NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.’” Federal Defendants’ Brief at 28 (quoting 40 C.F.R. § 1500.1(b)³⁵)(citing 40 C.F.R. § 1502.2(b) for the related proposition that, in an EIS, “[i]mpacts shall be discussed in proportion to their significance. There shall be only brief discussion of other than significant issues” (brackets in Federal Defendants’ Brief at 28, but not in 40 C.F.R. § 1502.2)). To defend the focus on dust, the Federal Defendants quote the EA, which states that “[g]iven the size and scope of the Proposed Action, the BLM expects that emissions from mobile and stationary sources would comprise a very small proportion of total Luna County emissions and would not result in NAAQS exceedances.” Federal Defendants’ Brief at 28 (quoting EA at 9 (AR 0000000025))(brackets in Federal Defendants’ Brief, but not in EA). The Federal Defendants quote a case from the United States District Court for the District of Colorado, which the Federal Defendants assert ruled that the “[p]etitioners failed to carry [their] burden to show agency acted arbitrarily or capriciously in not analyzing effects of CO₂ emissions further where agency concluded that ‘emissions from the proposed action are expected to be of such small scale that they would have little bearing on climate change.’” Federal Defendants’ Brief at 28 (quoting Swomley v. Schroyer, 484 F. Supp. 3d 970, 976 (D. Colo. 2020)(Tymkovich, C.J., sitting by designation), aff’d, No. 20-1335, 2021 WL 4810161 (10th Cir.

³⁵Effective September 14, 2020, this language has been omitted from 40 C.F.R. § 1500.1(b).

October 15, 2021)). The Federal Defendants state that the Plaintiffs' argument that the BLM failed "to perform a baseline survey for nesting migratory birds" is similarly unpersuasive, because "migratory birds are one of a number of resources the BLM determined, after reasonable consideration, did not merit detailed analysis." Federal Defendants' Brief at 28 (citing EA at 8 (AR 0000000024)).

The Federal Defendants also respond to the Plaintiffs' assertions that the BLM failed to "assess impacts outside the 40-acre mine area." Federal Defendants' Brief at 29. See Plaintiffs' Brief at 37 (citing Utahns for Better Transp. v. U.S. Dep't of Transp., 305 F.3d at 1179-80). The Federal Defendants state that the "Plaintiffs do not specify any impacts that are likely outside the mining area beyond the 'obvious fact that impacts will be felt by wildlife outside the 40 acres,'" Federal Defendants' Brief at 29 (quoting Plaintiffs' Brief at 37), and that case law upon which the Plaintiffs rely is "similarly vague," Federal Defendants' Brief at 29. The Federal Defendants assert that Utahns for Better Transp. v. U.S. Dep't of Transp. is not on point here, because, while that case "considered the effects of a new road on migratory birds and concluded that a 1,000-foot buffer was arbitrarily drawn especially in light of noise impacts," here, the Mining Project "is not anticipated to result in any significant impacts to migratory birds or other wildlife," and thus Utahns for Better Transp. v. U.S. Dep't of Transp. is "factually inapplicable." Federal Defendants' Brief at 29-30.

The Federal Defendants conclude their response to the Plaintiff's final NEPA-related argument with two points. First, they state again that, in making their arguments, the "Plaintiffs rely on inapposite regulations and case law concerning EISs, not EAs." Federal Defendants' Brief at 30. Second, after rejecting the Plaintiffs' proffered supporting case law, the Federal Defendants state that a more on point case in considering this challenge is W. Watersheds Project v. Bureau

of Land Mgmt., 721 F.3d 1264, 1275 (10th Cir. 2013), in which the Tenth Circuit “rejected plaintiffs’ argument ‘that the baseline was not detailed or robust enough, [because] these arguments are again premised on EIS requirements, not the more lenient EA requirements that actually govern.’” Federal Defendants’ Brief at 30 (quoting W. Watersheds Project v. Bureau of Land Mgmt., 721 F.3d at 1275)(brackets in Federal Defendants’ Brief, but not in W. Watersheds Project v. Bureau of Land Mgmt.).

ii. The FLPMA-Related Arguments.

Next, the Federal Defendants respond to the Plaintiffs’ FLMPA-related arguments. See Federal Defendants’ Brief at 31-38. As for the Plaintiffs’ first FLPMA argument -- that the BLM’s approval of the resource verification and the mining at the same time violates the FLPMA “which requires that at most, BLM can only consider an alternative of authorizing the exploration aspect of the project to ascertain the nature and extent of the deposit, and cannot consider or approve the entire open pit mineral extraction operations until the agency obtains that evidence,” Plaintiffs’ Brief at 38-39 -- the Federal Defendants respond that the relevant regulatory section, Title 43 of the Code of Federal Regulations, Subpart 3809, “do[es] not preclude BLM from approving an MPO^[36] that includes both exploration and extractive mining,” Federal Defendants’ Brief at 31. According to the Federal Defendants, “[t]here is nothing in the regulations that distinguishes between exploration and extraction for purposes of BLM’s consideration of whether proposed operations will prevent unnecessary or undue degradation, or that requires exploration to be completed before BLM can consider an MPO that contemplates mineral development and

³⁶“MPO” is what the Federal Defendants’ Brief calls the Plan of Operations (what this Memorandum Opinion and Order calls a “PO”).

extraction.” Federal Defendants’ Brief at 32. In short, the Federal Defendants assert that no provision exists that requires the “BLM to approve mining only after it has approved exploration.” Federal Defendants’ Brief at 32. The Plaintiffs’ arguments to the contrary, according to the Federal Defendants, come from a “mischaracteriz[ation]” of the relevant regulatory scheme, which only requires mining operators to ““avoid unnecessary impacts and facilitate reclamation by following a reasonable and customary mineral exploration, development, mining and reclamation sequence.”” Federal Defendants’ Brief at 32 (quoting Plaintiffs’ Brief at 39). Indeed, on the Federal Defendants’ account, “a ‘reasonable and customary mineral exploration, development, mining and reclamation sequence’ under section 3809.420(a)(2) depends on the nature of the proposed operations and mineral deposit.” Federal Defendants’ Brief at 32 (quoting 43 C.F.R. § 3809.420(a)(2)). In this case, they argue, the “BLM reasonably determined that additional exploration was not required to determine the presence of a mineral deposit,” and the “Plaintiffs do not point to any evidence that the operations proposed in the MPO would result in unnecessary impacts or that the operations would not follow a customary sequence, considering the nature of this specific mineral deposit and the fact that it is exposed at the surface.” Federal Defendants’ Brief at 32-33.

Confronting the Plaintiffs’ more technical arguments, the Federal Defendants state that the Plaintiffs’ reliance on the concept of “reasonably incident” from 30 U.S.C. § 612(a), see Procedural Background Section 2.a.iii, supra, at 88-93, is irrelevant here, because that statutory language serves to “prevent ‘abuses under the general mining laws by those persons who locate[d] mining claims on public lands for purposes other than that of legitimate mining activity,’” Federal Defendants’ Brief at 34 (quoting Bohmker v. Oregon, 903 F.3d 1029, 1035 (9th Cir. 2018))(alteration in Bohmker v. Oregon). Here, by contrast, the Federal Defendants argue, the

proposed operations consist of mining activity. See Federal Defendants’ Brief at 34. In addition, the Federal Defendants argue that the language in the PO which states that American Magnesium ““will reclaim the disturbances related to the verification drilling program”” if mining operations do not begin with one year of the end of the verification drilling, see Federal Defendants’ Brief at 34 (quoting Plaintiffs Brief at 41), does not prove that the BLM “understood exploration was separate from mining,” as the Plaintiffs suggest. Federal Defendants’ Brief at 34. Instead, the Federal Defendants argue that this statement says “nothing about *when* mining operations commence but only about *when* reclamation related to drilling will occur.” Federal Defendants’ Brief at 35 (emphasis in Federal Defendants’ Brief). Last, the Federal Defendants assert that whether it was feasible to approve the exploration before approving the full Mining Project is “irrelevant,” because the BLM was not required to approve the exploration before approving the full Mining Project, given that, the Federal Defendants argue, “there is no overarching requirement that BLM approve exploration operations before approving mining operations.” Federal Defendants’ Brief at 35.

The Federal Defendants next respond to the Plaintiffs’ second and final FLPMA-related argument, namely, that the BLM violated the FLPMA, because the lack of details regarding the off-site Processing Mill is contrary to the “BLM’s FLPMA mining regulations,” which require detailed information regarding ““processing facilities.”” Plaintiffs’ Brief at 43 (quoting 43 C.F.R. § 3809.401(b)(2)). In response, the Federal Defendants state that American Magnesium’s PO contains “sufficient information” to determine that the Mining Project as a whole will “not result in unnecessary or undue degradation.” Federal Defendants’ Brief at 35. In essence, this disagreement boils down to differing interpretations of what 43 C.F.R. § 3809.401 requires. The Federal Defendants point to language in the provision that refers to “[p]*reliminary or conceptual*

designs,” Federal Defendants’ Brief at 36 (quoting 43 C.F.R. § 3809.401(b)(2)(ii)), to argue that the BLM has “considerable discretion in determining the level of detail required to determine that an MPO is complete by meeting the content requirements in 43 C.F.R. § 3809.401(b), and can tailor the level of detail required to enable it to determine whether the project would prevent unnecessary or undue degradation,” Federal Defendants’ Brief at 36.

More generally, the Federal Defendants argue that, “because the processing mill is proposed to be developed on private lands, not public lands,” the “BLM has no approval authority over the mill and need not require detailed information about the mill to determine that a MPO is complete under 43 C.F.R. § 3809.401(b) or approve the MPO under 43 C.F.R. § 3809.411(d),” because the “BLM’s Part 3809 regulations were promulgated to ensure compliance with Congress’s mandate in FLPMA to ‘[p]revent unnecessary or undue degradation of *public lands* by operations authorized by the mining laws.’” Federal Defendants’ Brief at 36 (quoting 43 C.F.R. § 3809.1(a))(emphasis in Federal Defendants’ Brief, but not in 43 C.F.R. § 3809.1). The Plaintiffs’ argument to the contrary, according to the Federal Defendants, conflates the BLM’s obligation to prevent unnecessary or undue degradation with its obligations under the NEPA. See Federal Defendants’ Brief at 37. The Federal Defendants maintain that that information about activities on private lands, while relevant to NEPA analysis, “is not used by BLM to determine whether the project will result in unnecessary or undue degradation under FLPMA.” Federal Defendants’ Brief at 37 n.13. In short, the Federal Defendants conclude that “because the processing plant is proposed on private lands, the details of its construction and operation are not relevant to BLM’s review and approval of the MPO under FLPMA, and BLM reasonably determined that the MPO would not result in unnecessary or undue degradation of the public lands.” Federal Defendants’ Brief at 37.

iii. Remedy.

The Federal Defendants conclude, on the basis of their arguments, that “the Court should reject Plaintiffs’ claims and affirm the validity of BLM’s approval of the MPO.” Federal Defendants’ Brief at 38. The Federal Defendants state, however, that if the Court rules “in any respect” for the Plaintiffs, the “default” remedy is not vacatur, as the Plaintiffs argue. Federal Defendants’ Brief at 38. See Procedural Background Section 2.a.iv, supra, at 93. Rather, the Federal Defendants contend that, “[i]f the Court finds some aspect of BLM’s decision to be deficient, it may well find it necessary to remand the decision to BLM for further proceedings,” but that, the Court should evaluate the Allied-Signal factors and “should decline Plaintiffs’ invitation to vacate the challenged decision without first hearing from the parties in supplemental briefing.” Federal Defendants’ Brief at 39.

c. The American Magnesium Brief.

The Defendant-Intervenor American Magnesium “joins and concurs” in the Federal Defendants’ Brief. American Magnesium Brief at 4. It submits its own brief to add further factual details and to supplement the Federal Defendants’ response to the Plaintiffs’ NEPA-related arguments. See American Magnesium Brief at 4-11, 13-17.³⁷ The Court’s Factual Background section incorporates American Magnesium’s factual additions, supra, at 3-68, and thus here the Court focuses on American Magnesium’s supplemental argument against the Plaintiffs’ NEPA-related allegations.

³⁷American Magnesium “joins in and incorporates the Federal Defendants’ response regarding alleged violations of FLPMA as though set forth fully herein.” American Magnesium Brief at 18.

American Magnesium dedicates most of the American Magnesium Brief to arguing that the Administrative Record in this case “contains substantial information regarding the processing mill that supports BLM’s decision.” American Magnesium Brief at 15. Referencing the internal BLM communications that Plaintiffs claim “prove that BLM knew it had to consider the mill site and that BLM did not have enough information to do so,” American Magnesium Brief at 15 (citing Email from Kenneth Gardner, cc’d Anthony Bates, Leighandra Neeven, Ida Viarreal, William Auby, Re: Foothills Dolomite quarry (magnesium project); status at 4 (dated June 27, 2017), filed February 21, 2023 (Doc. 47-7); Email from Kenneth Gardner to William Auby, cc’d Leighandra Neeven and, Re: Foothills Dolomite quarry/magnesium project, update (dated July 17, 2017), filed February 21, 2023 (Doc. 47-10)), American Magnesium contends that the Plaintiffs “cherry-picked these exhibits and completely failed to identify the substantial information in the record that was provided by American Magnesium regarding the mill site and the ore processing,” American Magnesium Brief at 15.

American Magnesium states that, during the PO review process, the BLM periodically requested and received additional information from American Magnesium about the Mining Project. See American Magnesium Brief at 15-16. American Magnesium states that it provided all necessary clarifying information to the BLM in order for the latter to complete its EA analyses, including its “Conceptual Feasibility Study,” as well as “1) a flow chart of the mill process, waste products and produced products; 2) usage of water, electricity, and natural gas; 3) estimated carbon dioxide emissions; and 4) a map showing the proposed transportation route.” American Magnesium Brief at 16 (citing AM October 2019 Letter at AR 0000005610 to 0000005615). In short, American Magnesium argues that the “BLM obtained and analyzed the available data and information regarding the ore transportation and mill site,” and that “[t]he analysis in the EA

‘constitutes a reasonable, good faith presentation of the best information available under the circumstances.’” American Magnesium Brief at 17 (quoting Colo. Env’t Coal. v. Dombeck, 185 F.3d at 1172). Beyond this argument, American Magnesium states that it “joins in and incorporates the Federal Defendants’ response” regarding adequate analyses of reasonable alternatives and baseline conditions. American Magnesium Brief at 17. As for remedy, American Magnesium states that “[i]f the Court determines that any of the Plaintiffs’ claims have merits, American Magnesium joins with the Federal Defendants in requesting that the Court conduct further proceedings to determine an appropriate remedy” according to the Allied-Signal factors, American Magnesium Brief at 18, and, “until the Court issues a ruling on the merits, there is no factual basis for determining the appropriate remedy,” American Magnesium Brief at 20.

d. The Plaintiffs’ Reply.

The Plaintiffs spend over half of their Reply focusing on their leading NEPA-related argument -- that the BLM violated the NEPA by failing to analyze the impacts of the Mining Project’s off-site Processing Mill. See Plaintiffs’ Reply at 6-18. The Plaintiffs note at the outset that neither the BLM nor American Magnesium “dispute that NEPA requires BLM to fully review the ‘indirect’ impacts from the mill that will chemically process the ore from the mine.” Plaintiffs’ Reply at 6 (source of quoted material not cited). Moreover, the Plaintiffs cite statements from the Federal Defendants’ Brief and the American Magnesium Brief which acknowledge that the transportation and processing of the ore are “‘indirect effects,’” Plaintiffs’ Reply at 6 (quoting Federal Defendants’ Brief at 16), or “‘related actions,’” Plaintiffs’ Reply at 6 (quoting American magnesium Brief at 9), to the Mining Project. The issue, then, according to the Plaintiffs, is a more focused one: “whether BLM’s EA for the Project satisfies NEPA’s requirement that the agency fully consider and take a ‘hard look’ at all ‘direct, indirect, and cumulative impacts’ from the

Project, including AM's chemical processing mill." Plaintiffs' Reply at 6 (source of quoted material not cited).

While the BLM and American Magnesium contend that "the EA fully analyzed all potential impacts from the processing mill," Plaintiffs' Reply at 7 (citing Federal Defendants' Brief at 16-23; American Magnesium Brief at 10-11), the Plaintiffs assert that "[t]he record shows otherwise," Plaintiffs' Reply at 7. In particular, the Plaintiffs point to the fact that "the EA admits that it contains only 'general information'" about the effects of the off-site Processing Mill: "'To consider the potential indirect effects of processing the ore retrieved at the proposed mine, including processing of the ore, the BLM has gathered the following general information regarding processing.'" Plaintiffs' Reply at 7 (quoting EA at 22 (AR 0000000038)). The Plaintiffs contend that "the agency cannot rely on 'general information' to satisfy NEPA's 'hard look' requirement," because "[a] 'conclusory statement' about indirect impacts 'is insufficient' under NEPA." Plaintiffs' Reply at 7 (quoting Davis v. Mineta, 302 F.3d at 1122-23). The Plaintiffs again point to the internal BLM communications that seem to acknowledge that it needed more detailed information from American Magnesium to complete the EA. See Plaintiffs' Reply at 7 (citing Email from Kenneth Gardner to William Auby, cc'd Leighandra Neeven and, Re: Foothills Dolomite quarry/magnesium project, update (dated July 17, 2017), filed February 21, 2023 (Doc. 47-10)). The Plaintiffs also note that in the Federal Defendants' Brief, the Federal Defendants "noted the importance of obtaining 'information regarding activities on private lands to comply with NEPA.'" Plaintiffs' Reply at 7 (quoting Federal Defendants' Brief at 37 n.13).

On the more specific alleged shortcomings of the EA, the Plaintiffs state that in its analysis of air quality, the EA discusses only "estimated emissions" of dust and greenhouse gasses, but "does not estimate or analyze air quality impacts from the **other** pollution emissions from the

mill.” Plaintiffs’ Reply at 8 (emphasis in Plaintiffs’ Reply)(citing EA at 38 (AR 0000000054)). The Plaintiffs state that -- despite the Federal Defendants’ assertions to the contrary -- these other pollutant emissions, such as “carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), PM₁₀, particulate matter equal to or less than 2.5 microns in diameter (PM_{2.5}), sulfur dioxide (SO₂), and lead (Pb),” Plaintiffs’ Reply at 8 (quoting EA at 38 (AR 0000000054)), are relevant to an adequate analysis of the Processing Mill under NEPA, see Plaintiffs’ Reply at 8-10. The Plaintiffs also distinguish Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th 1016, 1046 (10th Cir. 2023), in which the plaintiffs state that the “BLM did much more than merely ‘reference’ the project’s air impacts from the oil and gas operations at issue there,” but instead it “specifically analyzed whether the projects would comply with the NAAQS, ‘found the air quality would not exceed the NAAQS or the NMAAQs,’ and calculated that the ‘annual emissions would increase by [certain percentages] depending on the pollutant.’” Plaintiffs’ Reply at 9 (quoting Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1046)(alteration in Plaintiffs’ Reply, but not in Diné Citizens Against Ruining Our Env’t v. Haaland).

As for the EA’s allegedly inadequate analysis of the Processing Mill’s potential effects of water quality and quantity, the Plaintiffs state that “the EA contains even less information (let alone the required ‘detailed information’) and analysis.” Plaintiffs’ Reply at 10 (source of quoted material not cited). The Plaintiffs state that, in the 2013 Feasibility Study for the Mill, American Magnesium acknowledged that “the waste from the processing mill poses a significant threat to water **quality**,” because of Magnesium Sludge. Plaintiffs’ Reply at 10 (emphasis in Plaintiffs’ Reply)(citing Conceptual Feasibility Report at 62-63 (AR 0000004774-0000004775)). The Plaintiffs assert, however, that “[t]he EA’s only mention of water related to the mill is a statement

regarding water **quantity**, saying that the mill would consume 17 million gallons of water annually for 30 years.” Plaintiffs’ Reply at 11 (emphasis in Plaintiffs’ Reply).

Concluding the section in the Plaintiffs’ Reply on the first NEPA-related argument, the Plaintiffs offer an in-depth argument of why the “BLM cannot avoid analyzing the mill’s impacts by labeling the mill ‘speculative.’” Plaintiffs’ Reply at 11 (source of quoted material not cited, but presumably the Federal Defendants’ Brief at 19). The Plaintiffs emphasize statements from the Federal Defendants’ Brief, which acknowledges that certain details and analysis about the Processing Mill’s impacts are impossible given the uncertainties about the details of that part of the operation: “‘BLM did not conduct further detailed analysis of the impacts of the processing mill because no further details of the mill were known to BLM at the time, and still are not known.’” Plaintiffs’ Reply at 11 (quoting Federal Defendants’ Brief at 18). Yet, as the Plaintiffs point out, the BLM also “acknowledges it has the authority to require AM to ‘provide information regarding activities on private lands to comply with NEPA,’” Plaintiffs’ Reply at 12 (quoting Federal Defendants’ Brief at 37 n.13), and -- as the Plaintiffs argue -- it is the “BLM’s duty under NEPA” to obtain the information required to analyze the Processing Mill’s impacts. Plaintiffs’ Reply at 12. See id. at 12 (quoting High Country Conservation Advocs. v. United States Forest Serv., 52 F. Supp. 3d 1174, 1196 (D. Colo. 2014)(Jackson, J.), which states that, under the NEPA, although “[r]easonable forecasting and speculation is . . . implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as ‘crystal ball inquiry’” (quoting Scientists’ Inst. for Pub. Info., Inc. v. Atomic Energy Comm’n, 481 F.2d 1079, 1092 (D.C. Cir. 1973))).

The Plaintiffs argue that the BLM and American Magnesium “want it both ways”: “They (especially AM) repeatedly highlight the economic benefits the mill will bring to Luna County,

but then argue that since the mill is ‘conceptual,’ BLM can get by with a cursory (and in some cases, as noted above, non-existent) analysis.” Plaintiffs’ Reply at 12. The Plaintiffs also argue that the fact that the EA’s dust pollution analysis is so robust is proof that the “BLM could have requested, obtained, and analyzed information regarding the mill’s air and water impacts.” Plaintiffs’ Reply at 12 (citing and discussing Diné Citizens Against Ruining Our Env’t v. Bernhardt, 923 F.3d 831, 858 (10th Cir. 2019)). Moreover, the Plaintiffs accuse the BLM of simply accepting and adopting the 2013 Feasibility Study’s promises that the Processing Mill would be “‘environmentally friendly,’” Plaintiffs’ Reply at 13 (quoting American Magnesium Brief at 10), without fulfilling its “independent duty to verify the information submitted by AM,” Plaintiffs’ Reply at 13. The Plaintiffs also discount the Federal Defendants’ reliance on the alleged policy change in the BLM’s 2018 Permanent Instruction Memorandum, because the Plaintiffs contend that those changes “‘applied only to the review of ‘connected actions,’ and not to ‘indirect impacts’ or ‘cumulative impacts,’ which are distinctly different under the NEPA regulations.” Plaintiffs’ Reply at 15 (source of quoted material not cited). The Plaintiffs also state that the “BLM does not respond to the caselaw quoted by Plaintiffs recognizing that BLM has the obligation to request all relevant information from the applicant so the agency can properly review the proposal and its impacts.” Plaintiffs’ Reply at 15. See id. at 15-17 (citing and discussing Ctr. for Biological Diversity v. U.S. Dep’t of Interior, 623 F.3d at 644; Ctr. for Biological Diversity v. United States Bureau of Land Mgmt., 2023 WL 387609, at *4-7; S. Fork Band Council Of W. Shoshone Of Nevada v. U.S. Dep’t of Interior, 588 F.3d at 725-26; Colo. Env’t Coal. v. Off. of Legacy Mgmt., 819 F. Supp. 2d at 1211-12). As a final point, the Plaintiffs reiterate their argument that the BLM’s reliance on the fact that American Magnesium “will submit permit applications for the mill to the state and Luna County, and that these agencies will regulate the mill,” cannot relieve the BLM of

its NEPA duties. Plaintiffs’ Reply at 17 (citing Env’t Def. Ctr. v. Bureau of Ocean Energy Mgmt., 36 F.4th 850, 874 (9th Cir. 2022), cert. denied sub nom. Am. Petroleum Inst. v. Env’t Def. Ctr., 143 S. Ct. 2582 (2023)).

Next, the Plaintiffs argue that approving “exploration only” -- instead of a combined resource verification and full mining project -- is a reasonable alternative. Plaintiffs’ Reply at 18. See id. at 18-21. The Plaintiffs argue that the BLM takes incoherent positions on this issue, with the BLM stating that the approval of an exploration-only project is not ““practical”” as “the mine and mill were tied together and certain to occur,” Plaintiffs’ Reply at 18 (quoting Federal Defendants’ Brief at 24, 25, but, on the other hand, “to avoid BLM’s NEPA duties to fully analyze the mill’s impacts, they assert that the mill is ‘speculative,’ and ‘conceptual’ and has little bearing on BLM’s review and approval of the mine,” Plaintiffs’ Reply at 18. Again, the Plaintiffs point to internal BLM communications which indicate that some employees believed that an exploration-only project is more appropriate at the present time. See Plaintiffs’ Reply at 18-19 (citing and discussing Email from Kenneth Gardner, cc’d Anthony Bates, Leighandra Neeven, Ida Viarreal, William Auby, Re: Foothills Dolomite quarry (magnesium project); status at 4 (dated June 27, 2017), filed February 21, 2023 (Doc. 47-7); Email from Kenneth Gardner to William Auby, cc’d Leighandra Neeven and, Re: Foothills Dolomite quarry/magnesium project, update (dated July 17, 2017), filed February 21, 2023 (Doc. 47-10)). The Plaintiffs state that the BLM’s non-consideration of approving an exploration-only project is a failure to consider the ““range of alternatives that covers the full spectrum of possibilities.”” Plaintiffs’ Reply at 20 (quoting Ayers v. Espy, 873 F. Supp. at 473).

Next, the Plaintiffs reply to the Federal Defendants’ arguments regarding the allegedly inadequate consideration of baseline conditions in the EA. See Plaintiffs’ Reply at 22-24. The

Plaintiffs focus their argument largely on the conceptual off-site Processing Mill, stating that “there is little data or analysis about the resources that will be affected,” and that, concerning the processing mill, “the EA briefly describes the location on the north edge of Deming, and provides a map, but little else.” Plaintiffs’ Reply at 22. In short, the Plaintiffs state that “[t]he EA does not adequately ‘describe the anticipated environmental consequences’ of the mill, and does not review the baseline conditions of the ‘soil and water,’ ‘vegetation,’ and other affected resources.” Plaintiffs’ Reply at 23 (quoting W. Watersheds Project v. Bureau of Land Mgmt., 721 F.3d at 1275). Last, the Plaintiffs take issue with the Federal Defendants’ assertion that the Plaintiffs only cite case law or regulations that are applicable to EISs, and not to EAs: the “Plaintiffs specifically noted the decisions that rejected EAs for mineral exploration due to a lack of adequate baseline conditions for affected resources, such as ground water.” Plaintiffs’ Reply at 23 (citing Gifford Pinchot Task Force v. Perez, No. CIV 13-0810, 2014 WL 3019165, at *25-33 (D. Or. July 3, 2014)(Hernandez, J.)).

After concluding the NEPA-portion of their Reply, the Plaintiffs attempt to rebut the Federal Defendants’ responses to their FLPMA-related arguments. See Plaintiffs’ Reply at 24-29. Here, again, the Plaintiffs accuse the Federal Defendants of taking incoherent positions. According to the Plaintiffs, in its brief, the “BLM correctly stated that a ‘reasonable and customary mineral exploration, development, mining and reclamation sequence’ under section 3809.420(a)(2) depends on the nature of the proposed operations and mineral deposit.” Plaintiffs’ Reply at 24 (quoting Federal Defendants’ Brief at 33). According to the Plaintiffs, the BLM argues that “AM has purportedly discovered a valuable mineral deposit demonstrated by some ‘outcrops’ of magnesium dolomite,” but elsewhere contradictorily “admits that it has no idea if valuable magnesium exists at the site -- that is why it needs to conduct extensive exploration drilling.”

Plaintiffs’ Reply at 24 (quoting Federal Defendants’ Brief at 34). The Plaintiffs also attack the idea that the Federal Defendants state, “in a footnote, that [the BLM] is free to disregard its own policy Handbook because it is not a promulgated regulation.” Plaintiffs’ Reply at 26 (citing Federal Defendants’ Brief at 31 n.9). To combat this idea, the Plaintiffs quote a case from the United States District Court for the District for Idaho, which states: “‘It does not matter whether the Policy and Strategy contain requirements or only guidelines -- either way, the BLM violates FLPMA by completely disregarding its own policies . . . without discussion or analysis.’” Plaintiffs’ Reply at 26 (quoting W. Watersheds Project v. Salazar, No. CIV 08-0516, 2011 WL 4526746, at *17 (D. Idaho September 28, 2011)(Winmill, J.).

Last, concerning the Plaintiffs’ second FLPMA-related argument, the Plaintiffs respond to the Federal Defendants’ contention that the BLM has “**no** duty to consider the mill’s impacts” for purposes of analyzing the Mining Project’s unnecessary or undue degradation. Plaintiffs’ Reply at 28 (emphasis in Plaintiffs’ Reply)(citing Federal Defendants’ Brief at 36). The Plaintiffs counter that this argument “is directly contradicted by BLM’s own position and statements in the record, which recognize that BLM cannot meet its duty to ‘prevent UUD’ without fully understanding the processing mill and its impacts.” Plaintiffs’ Reply at 29 (quoting December 2017 Letter at 2).

Further, as detailed above, BLM did, pursuant to its recognized NEPA and FLPMA review requirements, analyze some (albeit very limited) of the mill’s impacts (e.g. particulate matter emissions). Thus, the mill’s impacts are “relevant” to BLM’s review of the mine.

The problem is that BLM failed to review other critical impacts from the mill, especially the mill’s emissions of Criteria Pollutants under the Clean Air Act, as well as the serious threats to water quality from the Magnesium Residue and Magnesium Sludge recognized in AM’s 2013 Feasibility Study. Study at 62-63, AR0004774-75.

Plaintiffs' Reply at 29. Last, the Plaintiffs argue that the Court has "ample authority" to vacate the BLM's approval of the Mining Project, but that the Plaintiffs "do not oppose bifurcation of the remedy phase of this case to allow further briefing on remedy by all parties should Plaintiffs prevail on any of their claims." Plaintiffs' Reply at 30.

3. The Hearing.

The Court held a hearing on July 12, 2023. See Clerk's Minutes at 1, filed July 12, 2023 (Doc. 54). In opening the hearing, the Plaintiffs characterized this case as presenting "a very unusual situation." Draft Transcript of July 12, 2023, Hearing at 4:13-14 (taken July 12, 2023)("Tr.")(Flynn).³⁸ The Plaintiffs state, by way of a general overview:

This is the first time that the BLM has approved a mineral exploration drilling project and the mine at the same time in the same place. And along with the mine is a large scale industrial mill that's on private lands, proposed, north of Deming, where the BLM really has very little idea of the impacts from that processing mill. And this is despite, as we've shown in the record, numerous BLM officials saying that they should not be approving the mine until the exploration is done. That's the normal course on the western public lands, is a company comes in what an exploration plan, they search for minerals. If they don't find any, well, maybe they go home, they abandon their mining claims or whatever. Or, if they do find valuable mineral deposits, then they propose the mine and the mill and the infrastructure, which is much more involved impacts and facilities.

Tr. at 4:14-5:7 (Flynn). The Plaintiffs state "that didn't happen here," Tr. at 5:8 (Flynn), and then proceed to outline what they state are the two "most relevant and important NEPA violations," Tr. at 12:10-11 (Flynn), namely: (i) the BLM's alleged failure to look at the impacts of the Processing Mill, see Tr. at 6:4-10:3 (Flynn), and (ii) the failure to look at reasonable alternative of approving exploration only as opposed to exploration-plus-mining, see Tr. at 10:4-12:5 (Flynn). These

³⁸The Court's citations to the transcript of the hearing refer to the court reporter's original, unedited version. Any final transcript may contain slightly different page and/or line numbers.

arguments are largely a reiteration of the Plaintiffs' arguments in the Plaintiffs' Brief and in the Plaintiffs' Reply, with the Plaintiffs emphasizing that the Federal Defendants "want [to have] their cake and eat it too," by stating that the Processing Mill is speculative, so specific details about its environmental impacts are not required, but then also stating that, on the other hand, "it's not speculative, that's why they approved everything all at once." Tr. at 10:20-11:7 (Flynn).

The Federal Defendants respond by again stating that the Plaintiffs are conflating the "more limited" detail an EA requires with the more rigorous standards associated with an EIS. Tr. at 13:11-16 (Boylan). Because of this difference, the Federal Defendants state, broadly, that the "plaintiff[s'] NEPA arguments should be rejected because their quibbles with the EA amount to mere fly specs that do not defeat NEPA's goals of informed decision making, and informed public comment, and, therefore, cannot lead to reversal of BLM's decision." Tr. 13:17-22 (Boylan). The Federal Defendants then largely restate the arguments made in their briefing, and highlight that "[a]s the Tenth Circuit court has explained, BLM's decisions cannot be overturned merely because the EA could have been more thorough than it was." Tr. at 14:23-25 (Boylan). Rather, according to the Federal Defendants, the "plaintiffs must [show] that the alleged deficiency compromised the EA so severely as to render the FONSI arbitrary and capricious," and, here, the "Plaintiffs have not met this burden." Tr. at 15:1-4 (Boylan). The Federal Defendants also dispute the Plaintiffs' characterization of the purpose of the resource verification drilling, stating that, "in this case, the presence of the mineral resources are [] determined, because it's visible on the surface," and so "the resource verification drilling that's contemplated by the mining [plan] of operations is more to determine the scope of that resource." Tr. at 19:18-23 (Boylan).

Next, American Magnesium offered an account of the scope and context of the Mining Project, as well as an argument related to the interplay between State-level permitting requirements

and an agency's NEPA obligations. See Tr. at 20:24-46:16 (Court, Domenici). On the former, American Magnesium emphasizes the small size of the Mining Project, and states that the project site is "geographically separate and topographically separate" from the Florida Mountains. Tr. at 21:19-25 (Domenici). It describes the Mining Project as "a less than modest mine," Tr. at 23:25 (Domenici), and describes magnesium as "an essential mineral for production of many items in the United States," which is "not toxic," Tr. 27:1-3 (Domenici). It also explains that the Processing Mill, like all such facilities to process magnesium in this manner, is "extremely expensive," and "there is not one in the United States." Tr. 32:9-11 (Domenici). Moreover, American Magnesium explains, the permitting for the mill "will be rigorous," and so "to do all that work and expect my client to do that work without having essentially, this very modest, very simple, non-invasive 40 acre reserve under a federal permit would make absolutely no sense." Tr. at 32:17-21 (Domenici). Related to this point is American Magnesium's reliance on the permitting process as a means to respond to the Plaintiffs' concern regarding "magnesium sludge," with American Magnesium stating, "that material will be highly regulated," and that "you would have to have a contract and a lease with the landlord," and also "we expect, at least three to four other very important state permits." Tr. at 34:17-24 (Domenici). Accordingly, American Magnesium states, "[t]he idea that magnesium sludge would be unmanaged is not a realistic expectation," and American Magnesium does not "think that is appropriate as a basis to say you're in a modern world with enormous state and local regulation, this sludge that you've identified is going to be unregulated, simply doesn't take into account the realities of setting up a processing mill." Tr. at 34:24-25:6 (Domenici). American Magnesium then contends that the cases on which the Plaintiffs rely, which the Plaintiffs argue stand for the proposition that "the EA cannot substitute other permits in place of an EA analysis," Tr. at 37:15-17 (Domenici), are distinguishable, because those cases analyze "direct" as

opposed to “indirect” impacts, and also that the impact at issue in those cases was subject to a “general permit” instead of the “site-specific permitting regime[s],” which will apply in this case, and which “will study exactly what will happen with all of the process materials from this processing plant,” Tr. at 38:8-16 (Domenici). American Magnesium concluded by reaffirming that “[t]his is a small scale, well-located, highly mineralized deposit that can be processed efficiently, effectively, and safely through a long-standing industrial park set up by the City of Deming for facilities of this nature that will supply the water.” Tr. at 45:9-15 (Domenici).

The Plaintiffs replied by stating that, “when I was listening to the company’s presentation talking about all the control measures they’re going to have, and everything is going to be protected, boy, I wish that was in the record. I wish the public had a chance to comment on that.” Tr. at 47:16-20 (Flynn). The Plaintiffs also reaffirmed their position that “[a] non-NEPA document cannot satisfy the obligation under NEPA,” and thus “any discussion of how good or not good [permits] from the State of New Mexico is irrelevant when it comes to whether BLM satisfied its NEPA obligations.” Tr. at 49:4-9 (Flynn). The Plaintiffs state that this principle is especially true in a State, like New Mexico, which lacks its own State-level NEPA equivalent, and in such circumstances “it’s pretty much black letter that you can’t just punt to the state agency when the state agency doesn’t have a NEPA review.” Tr. at 55:25-56:2 (Flynn).

The Plaintiffs then moved on to explain their FLPMA-related arguments, which largely restate the Plaintiffs’ arguments in the briefing, but with special focus on the contention that the BLM’s approval of the resource verification and the mining at the same time violates the FLPMA. See Tr. at 60:5-63:6 (Court, Flynn). The Plaintiffs again argued -- as they did in their briefs -- that the relevant regulations, especially 43 CFR 3809.420(a)(2), “require[] that the operator must avoid unnecessary impacts . . . and facilitate reclamation by following a reasonable and customary

mineral exploration development mining and reclamation sequence.” Tr. at 60:19-61:13 (Flynn). The Federal Defendants argue that the sequencing approved in this case, “is not an anomaly,” and “happens frequently,” and nor does 43 CFR 3809.420(a)(2) require the “BLM to review and approve exploration and mining in a single project separately.” Tr. at 66:24-67:2 (Boylan).

The Court then queried American Magnesium: “I’m sorry for being slow on this, but tell me wh[y] the exploration is different from the mining. Since you already know you’ve got mineral there, what are you doing in the exploration phase?” Tr. at 75:16-20 (Court). American Magnesium responded that the drilling resource verification confirms the amount of subsurface magnesium deposits, ensuring that the magnesium “that is projected and likely to be there.” Tr. at 76:8-9 (Domenici). The Court responded, “So it is possible you drill your 80 wells, and it’s not what the geologists are telling you, and you would back off from the operation?” Tr. at 76:10-13 (Court). To this, American Magnesium responded that “[i]t’s highly unlikely,” and also that the primary purpose of the drilling is less for resource verification purposes and more to “get financing to move forward.” Tr. at 76:14-77:8 (Court, Domenici). The Plaintiffs responded that, “under the mining law, surface chips don’t make a viable mineral deposit,” and thus, “you need to get down there and find out.” Tr. at 80:12-16 (Flynn). The Plaintiffs concluded:

Your Honor, we’re not asking for anything extraordinary. It’s just: Do the exploration first, but don’t approve everything else with this gaping hole of information. That just really cuts the public out. It cuts our legs out under NEPA. And NEPA stands for something, and it stands for full public review. And we didn’t get that here. And so that’s what we respectfully ask this Court as a ruling on the merits.

Tr. 86:10-18 (Flynn). The parties then restated their respective arguments concerning the appropriate remedy in this case if the Court is inclined to grant the Plaintiffs’ Amended Petition, see Tr. at 86:21-94:25 (Court, Boylan, Domenici, Flynn), and the Court asked the parties about the

status of the Mining Project, see Tr. at 95:1-5 (Court). The Plaintiffs stated that “it’s not going forward,” Tr. at 95:8 (Flynn), and American Magnesium confirmed that, due to the expense of the project’s next steps, the company is holding off until it knows that its approval to access the minerals is lawful, see Tr. 97:9-98:7 (Domenici). The Court stated it would get the parties an opinion as soon as possible. See Tr. at 98:12-15 (Court).

4. Post-Hearing Notice.

Roughly four months after the hearing, the Plaintiffs filed the Plaintiffs’ Notice, which alerts the Court that

On October 30, 2023, BLM issued a new Decision . . . approving American Magnesium’s (AM) Revised Drilling Plan, which modified BLM’s previously-approved exploration drilling project. Concurrently, BLM issued a Finding of No Significant Impact for the revised exploration No change was made to BLM’s previous approval of the potential future mining project.

Plaintiffs’ Notice at 1. According to the Plaintiffs, these actions “underscore the merits of Plaintiffs’ case,” because this separation of the exploration-only drilling project shows that, contrary to the Federal Defendants’ previous arguments, “not only is the exploration-only alternative ‘practical’ and reasonable, it’s exactly what is happening.” Plaintiffs’ Notice at 1-2. This decision, the Plaintiffs state, “acknowledges that the mine may never happen, as it depends on the results of the exploration: ‘Once drilling is complete, either reclamation or mining as analyzed in the EA will occur.’” Plaintiffs’ Notice at 2 (quoting United States Department of the Interior, Bureau of Land Management, Las Cruces District Office, Decision, Mine Plan of Operations Modification Approved at 1 (dated October 30, 2023), filed November 3, 2023 (Doc. 55-1)). In addition, the Plaintiffs state that “government counsel informed Plaintiffs that BLM has now bifurcated the reclamation bonding for the two projects, which had previously been linked together.” Plaintiffs’ Notice at 2. The Plaintiffs conclude that “[t]hese new actions confirm

Plaintiffs’ argument, that the exploration drilling project is separate from the potential future mine, that it should have been considered as a reasonable alternative under NEPA, and not approved together with the potential mine and its unreviewed impacts (such as from the processing mill).” Plaintiffs’ Notice at 2.

According to the Federal Defendants, all the Plaintiffs’ Notice serves to accomplish is to notify the Court about “BLM’s approval of a modified plan of operations authorizing resource verification drilling.” Federal Defendants’ Notice Response at 1. This fact, according to the Federal Defendants, does nothing to change the fact that “Plaintiffs have pointed to no binding law that requires BLM to approve resource verification drilling before or separate from mining.” Notice Response at 1. The Federal Defendants acknowledge that, “in some instances, an operator may need to conduct exploration drilling before BLM can approve a plan of operations that authorizes extractive mining in order to ensure the presence of a mineral deposit,” but here, “because the mineral deposit is exposed at the surface, BLM reasonably determined that additional exploration was not required to determine the presence of a mineral deposit before approving a mining plan.” Notice Response at 2. In short, the Federal Defendants dismiss the notion that this new request for approval does anything to render the EA or the FONSI inadequate. See Notice Response at 2.

American Magnesium explains that the revised drilling plan at issue focuses “directly upon verification of the drilling necessary to satisfy the National Instruments (NI) 43-101,^[39] the

³⁹American Magnesium explains that the “NI 43-101 drilling reporting is the accepted reserve disclosure in the United States as well as Canada and Australia and other countries,” American Magnesium Notice Response at 2, and Wikipedia explains that NI 43-101 is “a securities regulatory instrument that governs how companies can disclose mining-related information in Canada. Its rules aim to prevent companies from sharing inaccurate or misleading information

recognized manner for demonstrating reserves to third parties.” American Magnesium Notice Response at 1-2. Moreover, American Magnesium states that, under the revised plan, the “drilling activity itself involves much less surface disturbance with only five drilling locations and reduced staging area: a significant reduction from the exploration in the approved MPOO.” American Magnesium Notice Response at 2. Nevertheless, American Magnesium contends that “the assertion that AM could have accomplished these actions without approval of the MPOO is speculation,” and the “Plaintiffs still do not present any evidence or authority that a separate drilling project, prior to BLM approval of the MPOO was feasible for AM or a reasonable alternative.” American Magnesium Notice Response at 2.

LAW REGARDING STANDING

A federal court may hear cases only where the plaintiff has standing to sue. See Summers v. Earth Island Institute, 555 U.S. 488, 492-93 (2009). The plaintiff bears the burden of establishing standing. See, e.g., Steel Co. v. Citizens for a Better Env’t, 523 U.S. 83, 104 (1998). The plaintiff “must ‘allege . . . facts essential to show jurisdiction. If [they] fai[l] to make the necessary allegations, [they have] no standing.’” FW/PBS v. City of Dallas, 493 U.S. 215, 231 (1990)(quoting McNutt v. Gen. Motors Acceptance Corp. of Indiana, 298 U.S. 178, 189 (1936))(brackets in FW/PBS v. City of Dallas, but not in McNutt v. Gen. Motors Acceptance Corp. of Indiana). Moreover, where the defendant challenges standing, a court must presume lack of

about their mineral assets with prospective investors and the public. It is overseen and enforced by the Canadian Securities Administrators,” National Instrument 43-101, Wikipedia, https://en.wikipedia.org/wiki/National_Instrument_43-101 (last visited July 24, 2024). Its purpose is “to ensure that misleading, erroneous or fraudulent information relating to mineral properties is not published and promoted to investors on the stock exchanges overseen by the Canadian Securities Administrators.” National Instrument 43-101, Wikipedia, *supra*.

jurisdiction “unless ‘the contrary appears affirmatively from the record.’” Renne v. Geary, 501 U.S. 312, 316 (1991)(quoting Bender v. Williamsport Area Sch. Dist., 475 U.S. 534, 546 (1986)). “It is a long-settled principle that standing cannot be ‘inferred argumentatively from averments in the pleadings,’ but rather ‘must affirmatively appear in the record.’” Phelps v. Hamilton, 122 F.3d 1309, 1326 (10th Cir. 1997)(quoting FW/PBS v. City of Dallas, 493 U.S. at 231).

“Article III of the Constitution limits the jurisdiction of federal courts to Cases and Controversies.” San Juan Cty., Utah v. United States, 503 F.3d 1163, 1171 (10th Cir. 2007)(en banc). See U.S. Const. art. III, § 2. “[A] suit does not present a Case or Controversy unless the plaintiff satisfies the requirements of Article III standing.” San Juan Cty., Utah v. United States, 503 F.3d at 1171. To establish standing, a plaintiff must show three things: “(1) ‘an injury in fact that is both concrete and particularized as well as actual or imminent’; (2) a causal relationship between the injury and the challenged conduct; and (3) a likelihood that the injury would be redressed by a favorable decision.” Protocols, LLC v. Leavitt, 549 F.3d 1294, 1298 (10th Cir. 2008)(quoting Wyoming ex rel. Crank v. United States, 539 F.3d 1236, 1241 (10th Cir. 2008)).

“Standing is determined as of the time the action is brought.” Smith v. U.S. Court of Appeals, for the Tenth Circuit, 484 F.3d 1281, 1285 (10th Cir. 2007)(quoting Nova Health Sys. v. Gandy, 416 F.3d 1149, 1154 (10th Cir. 2005)(Ebel, J.)). In Smith v. U.S. Court of Appeals, for the Tenth Circuit, the Tenth Circuit rejected a plaintiff’s standing to challenge the Colorado appellate courts’ practice of deciding cases in non-precedential, unpublished opinions, which the plaintiff asserted allowed courts to affirm incorrect decisions without interfering with official, “published” law. 484 F.3d at 1285. The Tenth Circuit noted that the plaintiff had recently taken his State appeal and, therefore,

was in no position to challenge the adequacy of state appellate review in cases culminating in unpublished opinions unless he could show that he would in fact receive such review from the state court of appeals (and from the state supreme court as well, if it took the case on certiorari).

484 F.3d at 1285.

By contrast, in Nova Health Sys. v. Gandy, the Tenth Circuit concluded that abortion providers had standing to challenge an Oklahoma parental-notification law on the grounds that they were in imminent danger of losing patients because of the new law. See 416 F.3d 1154. Although determining that there was standing, the Tenth Circuit was careful to frame the issue as whether, “as of June 2001 [the time the lawsuit was filed],” Nova Health faced any imminent likelihood that it would lose some minor patients seeking abortions. 416 F.3d at 1155. Moreover, while focusing on the time of filing, the Tenth Circuit allowed the use of evidence from later events -- prospective patients lost because of the notification law after the lawsuit began -- to demonstrate that the plaintiff faced an imminent threat as of the time of filing. See 416 F.3d at 1155.

In construing the standing doctrine, the Court has determined that an attorney running for office as a Court of Appeals of New Mexico judge lacked standing when that attorney alleged that the New Mexico attorney disciplinary counsel harmed his chances of election when the counsel published a summary suspension petition about him. See League of United Latin American Citizens v. Ferrera, 792 F. Supp. 2d 1222, 1233-39 (D.N.M. 2011)(Browning, J.). It so concluded, because the suspension petition’s facts “were already known to voters” through the aggressive campaign tactics of the attorney’s election rival, so the harm was not “fairly traceable to the Defendant’s action.” 792 F. Supp. 2d at 1238-39. The Court has, however, determined that a woman had standing to challenge a New Mexico criminal statute’s constitutionality, even though the state had not yet filed charges against the woman, because the district attorney had not attested

that he would not bring charges under the challenged statute. See Payne v. Wilder, 2017 WL 2257390, at *38 (D.N.M. January 3, 2017)(Browning, J.). The Court reasoned that an injury in fact existed, despite the lack of a charge, because the district attorney’s refusal to foreswear a prosecution demonstrated a “credible threat of prosecution.” Payne v. Wilder, 2017 WL 2257390, at *38. In addition to the cases listed above, the Court has adjudicated standing issues many times. See, e.g., Abraham v. WPX Production Productions, LLC, 184 F. Supp. 3d 1150, 1197 (D.N.M. 2016)(Browning, J.)(concluding that oil-well royalty owners had standing to assert a breach of the implied duty to market under New Mexico and Colorado law); Northern New Mexicans Protecting Land Water and Rights v. United States, 161 F. Supp. 3d 1020, 1042 (D.N.M. 2016)(Browning, J.)(concluding that an association lacked standing to sue on behalf of its members, because the relief sought was damages); Jarita Mesa Livestock Grazing Ass’n v. U.S. Forest Service, 140 F. Supp. 3d 1123, 1170-75 (D.N.M. 2015)(Browning, J.)(concluding that livestock association whose members had ancestral ties to grazing land in Northern New Mexico had standing to bring a NEPA claim); Alto Eldorado Partners v. City of Santa Fe, 2009 WL 1312856, at *21, 25 (D.N.M. March 11, 2009)(Browning, J.)(concluding that a developer did not have standing to challenge a city ordinance, because the ordinance would only affect him if he “lost his current permits,” which, at the time of the lawsuit, he had not lost)

LAW REGARDING MOOTNESS

Article III, Section 2 of the Constitution of the United States limits the federal courts’ jurisdiction to actual cases and controversies. See U.S. Const. art. III § 2. “Federal courts are without authority to decide questions that cannot affect the rights of litigants in the case before them.” Ford v. Sully, 773 F. Supp. 1457, 1464 (D. Kan. 1991)(O’Connor, C.J.)(citing North Carolina v. Rice, 404 U.S. 244, 246 (1971)). See Johansen v. City of Bartlesville, 862 F.2d 1423,

1426 (10th Cir. 1988); Johnson v. Riveland, 855 F.2d 1477, 1480 (10th Cir. 1988)). “To qualify as a case fit for federal-court adjudication, an actual controversy must be extant at all stages of review, not merely at the time the complaint is filed.” Arizonians for Official English v. Arizona, 520 U.S. 43, 67 (1997). See Rio Grande Silvery Minnow v. Bureau of Reclamation, 601 F.3d 1096, 1121 (10th Cir. 2010). Accordingly, if a case is moot, or becomes moot during any stage of the case, the court does not have jurisdiction to hear the case. A case becomes moot “when the issues presented are no longer ‘live’ or the parties lack a legally cognizable interest in the outcome.” County of Los Angeles v. Davis, 440 U.S. 625, 631 (1979)(citing Powell v. McCormack, 395 U.S. 486, 496 (1969)).

“Before deciding that there is no jurisdiction, the district court must look at the way the complaint is drawn to see if it is drawn so as to claim a right to recover under the Constitution and the laws of the United States.” Bell v. Hood, 327 U.S. 678, 682 (1946). Jurisdiction is not dependent on whether the plaintiff will succeed in his cause of action; jurisdiction is determined before the cause of action’s details, both in law and fact, are considered. See Bell v. Hood, 327 U.S. at 682.

The Tenth Circuit recognized a distinction between mootness and standing in Lucero v. Bureau of Collection Recovery, Inc.:

Like Article III standing, mootness is oft-cited as a constitutional limitation on federal court jurisdiction. *E.g.*, Building & Constr. Dep’t v. Rockwell Int’l Corp., 7 F.3d 1487, 1491 (10th Cir. 1993)(“Constitutional mootness doctrine is grounded in the Article III requirement that federal courts only decide actual, ongoing cases or controversies.”); see Matthew I. Hall, *The Partially Prudential Doctrine of Mootness*, 77 Geo. Wash. L. Rev. 562, 571 (2009)(citing footnote 3 in Liner v. Jafco, Inc., 375 U.S. 301 . . . (1964), as the first occasion in which the Supreme Court expressly derived its lack of jurisdiction to review moot cases from Article III). But although issues of mootness often bear resemblance to issues of standing, their conceptual boundaries are not coterminous. See Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc., 528 U.S. 167, 189-92 . . . (2000). Indeed, the

Supreme Court has historically recognized what are often called “exceptions” to the general rule against consideration of moot cases, as where a plaintiff’s status is “capable of repetition yet evading review,” *S. Pac. Terminal Co. v. Interstate Commerce Comm’n*, 219 U.S. 498, 515 . . . (1911), or where a defendant has ceased the challenged action but it is likely the defendant will “return to his old ways” - the latter often referred to as the voluntary cessation exception, *United States v. W.T. Grant Co.*, 345 U.S. 629, 632 . . . (1953); *see also, e.g., City of Erie v. Pap’s A.M.*, 529 U.S. 277 . . . (2000). These exceptions do not extend to the standing inquiry, demonstrating the contours of Article III as it distinctly pertains to mootness. *Friends of the Earth, Inc.*, 528 U.S. at 191, 120

Lucero v. Bureau of Collection Recovery, Inc., 639 F.3d at 1242-43.

A claim may become moot if “(i) it can be said with assurance that there is no reasonable expectation that the alleged violation will recur, and (ii) interim relief or events have completely and irrevocably eradicated the effects of the alleged violation.” Cnty. of L.A. v. Davis, 440 U.S. 625, 631 (1979). The burden of establishing mootness is a heavy one. See Cnty. Of L.A. v. Davis, 440 U.S. at 631. Courts are permitted to take into account the relative likelihood of the events which a party asserts keep the dispute from becoming moot. See Golden v. Zwickler, 394 U.S. 103, 109 (1969)(“We think that under all the circumstances of the case the fact that it was most unlikely that the Congressman would again be a candidate for Congress precluded a finding that there was ‘sufficient immediacy and reality’ here.”). A case can become moot based on intervening events, such as settling the case, see U.S. Bancorp Mortgage Co. v. Bonner Mall P’ship, 513 U.S. 18, 25 (1994)(“Where mootness results from settlement, the losing party has voluntarily forfeited his legal remedy by the ordinary processes of appeal”), or becoming a resident of the State whose residency laws one is challenging, see Sosna v. Iowa, 419 U.S. 393, 399 (1975)(“If appellant had sued only on her own behalf, both the fact that she now satisfies the one-year residency requirement and the fact that she has obtained a divorce elsewhere would make this case moot and require dismissal.”). In comparison, while mootness, a statute of limitations,

or some other legal doctrine may eventually bar a suit, one cannot lose standing once one has it. See Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc., 528 U.S. at 190-92, (“Furthermore, if mootness were simply ‘standing set in a time frame,’ the exception to mootness that arises when the defendant’s allegedly unlawful activity is ‘capable of repetition, yet evading review,’ could not exist.”).

The Court has concluded that a due process claim is not moot where the plaintiff does not receive the precise remedy he has requested. See Salazar v. City of Albuquerque, 776 F. Supp. 2d 1217, 1235-36 (D.N.M. 2011)(Browning, J.)(“Salazar”). In Salazar, a city bus driver brought a due process claim against the City of Albuquerque after being fired from his job. See 776 F. Supp. 2d at 1223. Although the employee was later reinstated, the Court determined that his due process claim was not moot, because he had asked for more than just reinstatement; he had also asked for punitive and back-pay damages. See 776 F. Supp. 2d at 1235-36. The Court has also determined that a claim is not necessarily moot even when a State court has previously dismissed the claim for lack of prosecution and for failure to appear, because there was still time for the plaintiff to seek reconsideration of the decision or an appeal. See Nieto v. Univ. of N.M., 727 F. Supp. 2d 1176, 1191 (D.N.M. 2010)(Browning, J.).

LAW REGARDING JUDICIAL REVIEW OF AGENCY ACTION

Under the APA,

[a] person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof. An action in a court of the United States seeking relief other than money damages and stating a claim that an agency or an officer or employee thereof acted or failed to act in an official capacity or under color of legal authority shall not be dismissed nor relief therein be denied on the ground that it is against the United States or that the United States is an indispensable party. The United States may be named as a defendant in any such action, and a judgment or decree may be entered against the United States: Provided, that any mandatory or

injunctive decree shall specify the Federal officer or officers (by name or by title), and their successors in office, personally responsible for compliance. Nothing herein (1) affects other limitations on judicial review or the power or duty of the court to dismiss any action or deny relief on any other appropriate legal or equitable ground; or (2) confers authority to grant relief if any other statute that grants consent to suit expressly or impliedly forbids the relief which is sought.

5 U.S.C. § 702. The APA empowers reviewing courts, “[t]o the extent necessary to decision and when presented,” to “decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action.” 5 U.S.C.

§ 706. Such a reviewing court “shall”:

(1) compel agency action unlawfully withheld or unreasonably delayed;
and

(2) hold unlawful and set aside agency action, findings, and conclusions found to be --

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;

(D) without observance of procedure required by law;

(E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or

(F) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court.

5 U.S.C. § 706. This statutory provision provides the “default standard” of review under the APA, which applies unless the agency’s enabling act -- or another statute -- provides otherwise. See Dickson v. Sec’y of Def., 68 F.3d 1396, 1404 (D.C. Cir. 1995)(“[T]he APA provides a default standard of judicial review -- arbitrary and capricious -- precisely for situations, such as this one,

where a statute does not otherwise provide a standard of judicial review.”). Although technically, § 706 provides standards -- not “a standard” -- of review, and different provisions in § 706 are used according to the subject of the review: for example, the arbitrary-and-capricious standard is used to review “[i]nformal agency action,” and informal (notice and comment) rulemaking, City of Colorado Springs v. Solis, 589 F.3d 1121, 1131 (10th Cir. 2009), and that standard is “‘very deferential’ to the agency’s determination,” Kobach v. U.S. Election Assistance Comm’n, 772 F.3d 1183, 1197 (10th Cir. 2014)(quoting W. Watersheds Project v. Bureau of Land Mgmt., 721 F.3d 1264, 1273 (10th Cir. 2013)). Section 706’s substantial evidence test, on the other hand, “applies almost exclusively to formal adjudication,” Ass’n of Data Processing Serv. Organizations, Inc. v. Bd. of Governors of Fed. Rsrv. Sys., 745 F.2d 677, 686 n.6 (D.C. Cir. 1984)(Scalia, J.), because “a case subject to sections 556 and 557 of this title” refers to the formal adjudication and formal rulemaking provisions of the APA, 5 U.S.C. § 706(2)(E). De novo review provided in 5 U.S.C. § 706(2)(F), the APA’s least deferential standard of review, is limited to use in two instances: “(1) when the action is adjudicatory in nature and the agency’s fact-finding procedures inadequate; and (2) when issues not previously before the agency are raised in a proceeding to *enforce* a nonadjudicatory action.” Franklin Sav. Ass’n v. Dir., Off. of Thrift Supervision, 934 F.2d 1127, 1142 n.7 (10th Cir. 1991)(emphasis in original)(citing Citizens to Pres. Overton Park, Inc. v. Volpe, 401 U.S. 402, 415 (1971), abrogated on other grounds by Califano v. Sanders, 430 U.S. 99 (1977)).⁴⁰ Importantly, § 706 also instructs the reviewing court, “[i]n making the

⁴⁰In 1947, shortly after the passage of the APA, President Truman’s Attorney General -- and future Associate Justice of the Supreme Court -- Tom Clark published the Attorney General’s Manual on the Administrative Procedure Act, which was prepared as a guide to the then-nascent APA. See United States Department of Justice, Tom C. Clark, Attorney General, Attorney General’s Manual on the Administrative Procedure Act (1947)(“AG’s Manual on the APA”).

foregoing determinations,” to “review the whole record or those parts of it cited by a party.” 5 U.S.C. § 706. See Pennaco Energy, Inc. v. U.S. Dep’t of Interior, 377 F.3d 1147, 1157 (10th Cir. 2004)(rejecting the notion that the reviewing court’s analysis “should be limited to those passages expressly relied upon by the [agency]”).

In the Tenth Circuit, under Olenhouse, 42 F.3d at 1580, “[r]eviews of agency action in the district courts [under the APA] must be processed as *appeals*. In such circumstances the district court should govern itself by referring to the Federal Rules of Appellate Procedure.” 42 F.3d at 1580 (emphasis in Olenhouse). See WildEarth Guardians v. U.S. Forest Serv., 668 F. Supp. at 1323. “As a group, the devices appellate courts normally use are generally more consistent with the APA’s judicial review scheme than the devices that trial courts generally use, which presume nothing about the case’s merits and divide burdens of proof and production almost equally between the plaintiff and defendant.” Northern New Mexicans Protecting Land and Water Rights v. United States, 2015 WL 8329509, at *9 (D.N.M. 2015)(Browning, J.).

Therein, Attorney General Clark remarks -- contrary to the Supreme Court’s later interpretation of § 706(2)(F) in Citizens to Pres. Overton Park, Inc. v. Volpe, 401 U.S. at 415 -- that language in § 706(2)(F), that “to the extent that the facts are subject to trial de novo by the reviewing court,” “obviously refers only to those existing situations in which judicial review has consisted of a trial de novo.” AG’s Manual on the APA at 109. In essence, AG’s Manual on the APA indicates that it was the Attorney General’s view -- in 1947 -- that § 706(2)(F) did not establish a standard by which courts could apply the de novo standard of review to situations outside of those which existed at the time of the APA’s passage. While this interpretation is not binding on any court, perhaps owing to its temporal proximity to the passage of the APA, even the Supreme Court has acknowledged that “some deference” should be afforded to the AG’s Manual on the APA: “the Attorney General’s Manual on the Administrative Procedure Act 31, 35 (1947), a contemporaneous interpretation previously given some deference by this Court because of the role played by the Department of Justice in drafting the legislation, further confirms that view.” Vermont Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc., 435 U.S. 519, 546 (1978)(footnote removed).

1. Reviewing Agency Factual Determinations.

Under the APA, a reviewing court must accept an agency's factual determinations in informal proceedings unless they are "arbitrary [or] capricious," 5 U.S.C. § 706(2)(A), and its factual determinations in formal proceedings unless they are "unsupported by substantial evidence," 5 U.S.C. § 706(2)(E). The APA's two linguistic formulations amount to a single substantive standard of review. See Ass'n of Data Processing Serv. Orgs., Inc. v. Bd. of Govs. of the Fed. Reserve Sys., 745 F.2d at 683-84 (explaining that, as to factual findings, "there is no *substantive* difference between what [the arbitrary or capricious standard] requires and what would be required by the substantial evidence test, since it is impossible to conceive of a 'nonarbitrary' factual judgment supported only by evidence that is not substantial in the APA sense" (emphasis in original)). See also id. at 684 ("[T]his does not consign paragraph (E) of the APA's judicial review section to pointlessness. The distinctive function of paragraph (E) -- what it achieves that paragraph (A) does not -- is to require substantial evidence to be found *within the record of closed-record proceedings* to which it exclusively applies." (emphasis in original)).

Again, in reviewing agency action under the arbitrary-or-capricious standard, a court considers the administrative record -- or at least those portions of the record that the parties provide -- and not materials outside of the record. See 5 U.S.C. § 706 ("In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party."); Fed. R. App. P. 16 ("The record on review or enforcement of an agency order consists of . . . the order involved; . . . any findings or report on which it is based; and . . . the pleadings, evidence, and other parts of the proceedings before the agency."); Ass'n of Data Processing Serv. Orgs., Inc. v. Bd. of Govs. of the Fed. Reserve Sys., 745 F.2d at 684 ("[W]hether the administrator was arbitrary must be determined on the basis of what he had before him when he acted."). See also Franklin Sav.

Ass’n v. Dir., Office of Thrift Supervision, 934 F.2d 1127, 1137 (10th Cir. 1991)(“[W]here Congress has provided for judicial review without setting forth . . . procedures to be followed in conducting that review, the Supreme Court has advised such review shall be confined to the administrative record and, in most cases, no de novo proceedings may be had.”). Tenth Circuit precedent indicates, however, that the ordinary evidentiary rules regarding judicial notice apply when a court reviews agency action. See New Mexico ex. rel. Richardson v. Bureau of Land Mgmt., 565 F.3d 683, 702 n.21 (10th Cir. 2009)(citing Fed. R. Evid. 201(b)) (“We take judicial notice of this document, which is included in the record before us in [another case].”); id. at 702 n.22 (“We conclude that the occurrence of Falcon releases is not subject to reasonable factual dispute and is capable of determination using sources whose accuracy cannot reasonably be questioned, and we take judicial notice thereof.”). In contrast, the United States Courts of Appeals for the Ninth and Eleventh Circuits -- as well as decisions from the United States District Court for the District of Columbia -- have held that taking judicial notice is generally inappropriate in APA review, subject to extraordinary circumstances or inadvertent omission from the administrative record. See Fence Creek Cattle Co. v. U.S. Forest Serv., 602 F.3d 1125, 1131 (9th Cir. 2010); National Min. Ass’n v. Sec’y U.S. Dep’t of Labor, 812 F.3d 843, 875 (11th Cir. 2016); Dist. Hosp. Partners, L.P. v. Sebelius, 971 F. Supp. 2d 15, 32 (D.D.C. 2013)(Huvelle, J.) (“The Court, however, notes that taking judicial notice is typically an inadequate mechanism for a court to consider extra-record evidence when reviewing an agency action.”), aff’d sub nom. Dist. Hosp. Partners, L.P. v. Burwell, 786 F.3d 46 (D.C. Cir. 2015). Broadly, the Tenth Circuit has expressed that “[w]hile judicial review of agency action is normally restricted to the administrative record, we have recognized that consideration of extra-record materials is appropriate in ‘extremely limited’ circumstances, such as where the agency ignored relevant factors it should have

considered or considered factors left out of the formal record.” Lee v. U.S. Air Force, 354 F.3d 1229, 1242 (10th Cir. 2004)(quoting Am. Min. Cong. v. Thomas, 772 F.2d 617, 626 (10th Cir. 1985)).

To fulfill its function under the APA, a reviewing court should engage in a “thorough, probing, in-depth review” of the whole record before it when determining whether an agency’s decision survives arbitrary-or-capricious review. Wyoming v. United States, 279 F.3d 1214, 1238 (10th Cir. 2002)(citation omitted). The Tenth Circuit explains:

In determining whether the agency acted in an arbitrary and capricious manner, we must ensure that the agency decision was based on a consideration of the relevant factors and examine whether there has been a clear error of judgment. We consider an agency decision arbitrary and capricious if the agency relied on factors which Congress had not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Colo. Env’t Coal. v. Dombeck, 185 F.3d 1162, 1167 (10th Cir. 1999). Arbitrary-or-capricious review requires a district court “to engage in a substantive review of the record to determine if the agency considered relevant factors and articulated a reasoned basis for its conclusions,” Olenhouse, 42 F.3d at 1580, but it is not to assess the wisdom or merits of the agency’s decision, see Colo. Env’t Coal. v. Dombeck, 185 F.3d at 1172. The agency must articulate the same rationale for its findings and conclusions on appeal upon which it relied in its internal proceedings. See SEC v. Chenery Corp., 318 U.S. 80 (1943). While the court may not supply a reasoned basis for the agency’s action that the agency does not give itself, the court should “uphold a decision of less than ideal clarity if the agency’s path may reasonably be discerned.” Bowman Transp., Inc. v. Arkansas-Best Freight Sys., Inc., 419 U.S. 281, 286 (1974).

2. Reviewing Agency Legal Interpretations.

In promulgating and enforcing regulations, agencies must interpret federal statutes, their own regulations, and the Constitution, and Courts reviewing those interpretations apply three different deference standards, depending on the law at issue. First, as it pertains to federal statutes, between 1984 and 2024, courts had to defer to agency interpretations of ambiguous statutes that the federal agency administered, and this deference was known as Chevron deference -- named after the eponymous 1984 case Chevron, U.S.A., Inc. v. Natural Resource Defense Council, Inc., 467 U.S. 837 (1984)(“Chevron”). Chevron deference was a two-step process⁴¹ that first asked whether the statutory provision in question was clear and, if it was not, then asked whether the agency’s interpretation of the unclear statute was reasonable. The Supreme Court, however, overturned this deferential approach during its October 2023 term in Loper Bright Enterprises v. Raimondo, 144 S. Ct. 2244, 603 U.S. ____ (2024)(“Loper Bright”).

In Loper Bright, in an opinion that the Honorable John Roberts, Chief Justice of the United States, authored, the Supreme Court reviews the traditional understandings of the judicial function, quoting Alexander Hamilton for the proposition that “[t]he Framers . . . envisioned that the final ‘interpretation of the laws’ would be ‘the proper and peculiar province of the courts,’” Loper Bright, 144 S. Ct. at 2257 (quoting The Federalist no. 78 (Hamilton)), and the Honorable John Marshall, former Chief Justice of the United States, for the oft-cited principle that “[i]t is emphatically the province and duty of the judicial department to say what the law is,” Loper Bright, 144 S. Ct. at 2257 (quoting Marbury v. Madison, 1 Cranch 137, 177 (1803)). The Supreme

⁴¹There was, additionally, a threshold step -- which Professor Cass Sunstein famously called “step zero” -- which asked whether Chevron deference applies to the agency decision at all. See Cass R. Sunstein, Chevron Step Zero, 92 Va. L. Rev. 187 (2006).

Court describes that, although the New Deal “ushered in a ‘rapid expansion of the administrative process,’” the Supreme Court continued to “adhere to the traditional understanding that questions of law were for courts to decide, exercising independent judgment.” Loper Bright, 144 S. Ct. at 2257 (quoting United States v. Morton Salt Co., 338 U.S. 632, 644 (1950)). The Supreme Court then reads and analyzes the plain language of the APA’s Section 706 -- which states at the outset that, “[t]o the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action,” 5 U.S.C. § 706 -- and concludes that the APA “codifies for agency cases the unremarkable, yet elemental proposition reflected by judicial practice dating back to *Marbury*: that courts decide legal questions by applying their own judgment.” Loper Bright, 144 S. Ct. at 2261.

The Supreme Court then explains that “[t]he deference that *Chevron* requires of courts reviewing agency action cannot be squared with the APA,” Loper Bright, 144 S. Ct. at 2263, largely because “[t]he ‘law of deference’ . . . built on the foundation laid in *Chevron* [is] ‘[h]eedless of the original design’ of the APA,” Loper Bright, 144 S. Ct. at 2265 (quoting Perez v. Mortg. Bankers Ass’n, 575 U.S. 92, 109 (2015)(Scalia, J., concurring in the judgment)). Moreover, according to the Supreme Court, “agencies have no special competence in resolving statutory ambiguities. Courts do.” Loper Bright, 144 S. Ct. at 2266. In lieu of Chevron’s presumption, the Supreme Court observes that “[t]he better presumption is . . . that Congress expects courts to do their ordinary job of interpreting statutes, with due respect for the views of the Executive Branch.” Loper Bright, 144 S. Ct. at 2267. This, therefore, is what takes the place of Chevron deference: ordinary judicial interpretation of statutes, and courts are free to review and

reject statutory interpretations that federal agencies offer.⁴²

Second, despite the demise of Chevron, when agencies interpret their own regulations -- to, for example, adjudicate whether a regulated party was in compliance with them -- courts accord agencies what is known as Auer or Seminole Rock deference. See Auer v. Robbins, 519 U.S. 452 (1997) (“Auer”); Bowles v. Seminole Rock & Sand Co., 325 U.S. 410 (1945). This deference is applied in the same manner as the erstwhile Chevron deference and is substantively identical. There would be little reason to have a separate name for this doctrine, except that its logical underpinnings are much shakier, and its future is, accordingly, more uncertain. Justice Scalia, after years of applying the doctrine followed by years of questioning its soundness, finally denounced Auer deference in 2013 in his dissent in Decker v. Northwest Environmental Defense Center, 568 U.S. 597 (2013). The Court cannot describe the reasons for Justice Scalia’s abandonment of the doctrine better than the Justice himself:

⁴²The Supreme Court notes, however, that its holding does not forbid Congress from conferring some degree of statutory authority on agencies:

That is not to say that Congress cannot or does not confer discretionary authority on agencies. Congress may do so, subject to constitutional limits, and it often has. But to stay out of discretionary policymaking left to the political branches, judges need only fulfill their obligations under the APA to independently identify and respect such delegations of authority, police the outer statutory boundaries of those delegations, and ensure that agencies exercise their discretion consistent with the APA. By forcing courts to instead pretend that ambiguities are necessarily delegations, *Chevron* does not prevent judges from making policy. It prevents them from judging.

Loper Bright, 144 S. Ct. at 2268. In addition, Loper Bright affirms that Skidmore deference continues to apply. See Loper Bright, 144 S. Ct. at 2262-63. Under this species of deference, “‘interpretations and opinions’ of the relevant agency, ‘made in pursuance of official duty’ and ‘based upon . . . specialized experience,’ ‘constitute[d] a body of experience and informed judgment to which courts and litigants [could] properly resort for guidance,’ even on legal questions.” Loper Bright, 144 S. Ct. at 2259 (quoting Skidmore v. Swift & Co., 323 U.S. 134, 139-40 (1944)).

For decades, and for no good reason, we have been giving agencies the authority to say what their rules mean, under the harmless-sounding banner of “defer[ring] to an agency’s interpretation of its own regulations.” *Talk America, Inc. v. Michigan Bell Telephone Co.*, [564] U.S. [50], 131 S.Ct. 2254, 2265 . . . (2011) (Scalia, J., concurring). This is generally called *Seminole Rock* or *Auer* deference.

....

The canonical formulation of *Auer* deference is that we will enforce an agency’s interpretation of its own rules unless that interpretation is “plainly erroneous or inconsistent with the regulation.” But of course whenever the agency’s interpretation of the regulation is different from the fairest reading, it is in that sense “inconsistent” with the regulation. Obviously, that is not enough, or there would be nothing for *Auer* to do. In practice, *Auer* deference is *Chevron* deference applied to regulations rather than statutes. The agency’s interpretation will be accepted if, though not the fairest reading of the regulation, it is a plausible reading - within the scope of the ambiguity that the regulation contains.

Our cases have not put forward a persuasive justification for *Auer* deference. The first case to apply it, *Seminole Rock*, offered no justification whatever -- just the *ipse dixit* that “the administrative interpretation . . . becomes of controlling weight unless it is plainly erroneous or inconsistent with the regulation.” Our later cases provide two principal explanations, neither of which has much to be said for it. First, some cases say that the agency, as the drafter of the rule, will have some special insight into its intent when enacting it. The implied premise of this argument -- that what we are looking for is the agency’s intent in adopting the rule -- is false. There is true of regulations what is true of statutes. As Justice Holmes put it: “[w]e do not inquire what the legislature meant; we ask only what the statute means.” Whether governing rules are made by the national legislature or an administrative agency, we are bound by what they say, not by the unexpressed intention of those who made them.

The other rationale our cases provide is that the agency possesses special expertise in administering its “complex and highly technical regulatory program.” That is true enough, and it leads to the conclusion that agencies and not courts should make regulations. But it has nothing to do with who should interpret regulations -- unless one believes that the purpose of interpretation is to make the regulatory program work in a fashion that the current leadership of the agency deems effective. Making regulatory programs effective is the purpose of rulemaking, in which the agency uses its “special expertise” to formulate the best rule. But the purpose of interpretation is to determine the fair meaning of the rule - to “say what the law is.” Not to make policy, but to determine what policy has been made and promulgated by the agency, to which the public owes obedience. Indeed, since the leadership of agencies (and hence the policy preferences of

agencies) changes with Presidential administrations, an agency head can only be sure that the application of his “special expertise” to the issue addressed by a regulation will be given effect if we adhere to predictable principles of textual interpretation rather than defer to the “special expertise” of his successors. If we take agency enactments as written, the Executive has a stable background against which to write its rules and achieve the policy ends it thinks best.

Another conceivable justification for *Auer* deference, though not one that is to be found in our cases, is this: If it is reasonable to defer to agencies regarding the meaning of statutes that Congress enacted, as we do per *Chevron*, it is a fortiori reasonable to defer to them regarding the meaning of regulations that they themselves crafted. To give an agency less control over the meaning of its own regulations than it has over the meaning of a congressionally enacted statute seems quite odd.

But it is not odd at all. The theory of *Chevron* (take it or leave it) is that when Congress gives an agency authority to administer a statute, including authority to issue interpretive regulations, it implicitly accords the agency a degree of discretion, which the courts must respect, regarding the meaning of the statute. While the implication of an agency power to clarify the statute is reasonable enough, there is surely no congressional implication that the agency can resolve ambiguities in its own regulations. For that would violate a fundamental principle of separation of powers -- that the power to write a law and the power to interpret it cannot rest in the same hands. “When the legislative and executive powers are united in the same person . . . there can be no liberty; because apprehensions may arise, lest the same monarch or senate should enact tyrannical laws, to execute them in a tyrannical manner.” Montesquieu, *Spirit of the Laws* bk. XI, at 151-152 (O. Piest ed., T. Nugent transl. 1949). Congress cannot enlarge its own power through *Chevron* -- whatever it leaves vague in the statute will be worked out by someone else. *Chevron* represents a presumption about who, as between the Executive and the Judiciary, that someone else will be. (The Executive, by the way -- the competing political branch -- is the less congenial repository of the power as far as Congress is concerned.) So Congress’s incentive is to speak as clearly as possible on the matters it regards as important.

But when an agency interprets its own rules -- that is something else. Then the power to prescribe is augmented by the power to interpret; and the incentive is to speak vaguely and broadly, so as to retain a “flexibility” that will enable “clarification” with retroactive effect. “It is perfectly understandable” for an agency to “issue vague regulations” if doing so will “maximiz[e] agency power.” Combining the power to prescribe with the power to interpret is not a new evil: Blackstone condemned the practice of resolving doubts about “the construction of the Roman laws” by “stat[ing] the case to the emperor in writing, and tak[ing] his opinion upon it.” 1 Wm. Blackstone, *Commentaries on the Laws of England* 58 (1765). And our Constitution did not mirror the British practice of using the House

of Lords as a court of last resort, due in part to the fear that he who has “agency in passing bad laws” might operate in the “same spirit” in their interpretation. The Federalist No. 81, at 543-544 (Alexander Hamilton)(J. Cooke ed. 1961). *Auer* deference encourages agencies to be “vague in framing regulations, with the plan of issuing ‘interpretations’ to create the intended new law without observance of notice and comment procedures.” *Auer* is not a logical corollary to *Chevron* but a dangerous permission slip for the arrogation of power.

It is true enough that *Auer* deference has the same beneficial pragmatic effect as *Chevron* deference: The country need not endure the uncertainty produced by divergent views of numerous district courts and courts of appeals as to what is the fairest reading of the regulation, until a definitive answer is finally provided, years later, by this Court. The agency’s view can be relied upon, unless it is, so to speak, beyond the pale. But the duration of the uncertainty produced by a vague regulation need not be as long as the uncertainty produced by a vague statute. For as soon as an interpretation uncongenial to the agency is pronounced by a district court, the agency can begin the process of amending the regulation to make its meaning entirely clear. The circumstances of this case demonstrate the point. While these cases were being briefed before us, EPA issued a rule designed to respond to the Court of Appeals judgment we are reviewing. It did so (by the standards of such things) relatively quickly: The decision below was handed down in May 2011, and in December 2012 the EPA published an amended rule setting forth in unmistakable terms the position it argues here. And there is another respect in which a lack of *Chevron*-type deference has less severe pragmatic consequences for rules than for statutes. In many cases, when an agency believes that its rule permits conduct that the text arguably forbids, it can simply exercise its discretion not to prosecute. That is not possible, of course, when, as here, a party harmed by the violation has standing to compel enforcement.

In any case, however great may be the efficiency gains derived from *Auer* deference, beneficial effect cannot justify a rule that not only has no principled basis but contravenes one of the great rules of separation of powers: He who writes a law must not adjudge its violation.

Decker v. Nw. Env’tl. Def. Ctr., 568 U.S. 597, 616-21 (Scalia, J., dissenting)(alterations in original)(citations omitted). Although the Court shares Justice Scalia’s concerns about Auer deference, it is, for the time being, the law of the land, and, as a federal district court, the Court

must apply it.⁴³

Moreover, courts afford agencies no deference in interpreting the Constitution. See U.S. West, Inc. v. FCC, 182 F.3d 1224, 1231 (10th Cir. 1999)(“[A]n unconstitutional interpretation is not entitled to *Chevron* deference. . . . [D]eference to an agency interpretation is inappropriate not only when it is conclusively unconstitutional, but also when it raises serious constitutional questions.” (citing, e.g., Rust v. Sullivan, 500 U.S. 173, 190-91 (1991))). Courts have superior competence in interpreting -- and Constitutionally vested authority and responsibility to interpret -- the Constitution’s content. The presence of a Constitutional claim does not take a court’s review outside of the APA, however -- § 706(2)(B) specifically contemplates adjudication of Constitutional issues -- and courts must still respect agency fact-finding and the administrative record when reviewing agency action for Constitutional infirmities; they just should not defer to the agency on issues of substantive legal interpretation. See, e.g., Robbins v. U.S. Bureau of Land Mgmt., 438 F.3d 1074, 1085 (10th Cir. 2006)(“We review Robbins’ [constitutional] due process claim against the [agency] under the framework set forth in the APA.”).

Last, the most recent development in Chevron-adjacent jurisprudence is the rise of the “major questions doctrine.”⁴⁴ W. Virginia v. Env’t Prot. Agency, 597 U.S. 697, 724

⁴³Clarence Thomas, Associate Justice of the Supreme Court, and Neil Gorsuch, Associate Justice of the Supreme Court, have recently echoed Justice Scalia’s concerns with Auer deference and have called on the Supreme Court to reconsider and overrule Auer. See Garco Construction, Inc. v. Speer, 138 S. Ct. 1052, 1052-53 (2018)(dissenting from denial of certiorari).

⁴⁴The Court acknowledges that the novelty -- or, alternatively, the historical basis -- of this doctrine is a source of debate, even among the Justices themselves. Compare W. Virginia v. Env’t Prot. Agency, 597 U.S. 697, 766 (2022)(Kagan, J., dissenting)(stating that the majority opinion “announces the arrival of the ‘major questions doctrine’” (quoting Majority Op. at 724)), with W. Virginia v. Env’t Prot. Agency, 597 U.S. at 740 (Gorsuch, J., concurring)(“stating that “[s]ome version” of the major questions doctrine “can be traced to at least 1897”). See Thomas W. Merrill,

(2022)(Roberts, C.J.)(“West Virginia v. EPA”). Concisely put, under this doctrine, a court should not sustain an agency action that involves regulation of “major questions” -- those of great “economic and political significance,” West Virginia v. EPA, 597 U.S. at 721 (quoting Food & Drug Admin. v. Brown & Williamson Tobacco Corp., 529 U.S. 120, 147 (2000)(O’Connor, J.)) - unless the agency can point to clear authorization from Congress for such an action, see West Virginia v. EPA, 597 U.S. at 720-24. Although the majority opinion in Supreme Court in West Virginia v. EPA never mentions the erstwhile Chevron doctrine, many academic commentators have conceptualized the major questions doctrine as a “exception” or “carve-out” to Chevron analysis. See Merrill, The Major Questions Doctrine: Right Diagnosis, Wrong Remedy, *supra*, at 2 (“[T]he major questions doctrine should be seen as a carve-out from the Chevron doctrine, one that all six justices in the conservative majority could agree on as a partial corrective to some of the most frequently cited failings of the Chevron regime.”); Mila Sohoni, The Major Questions

The Major Questions Doctrine: Right Diagnosis, Wrong Remedy at 2, Hoover Inst., Legitimacy of Administrative Law Essay Series, available at https://www.hoover.org/sites/default/files/research/docs/Merrill_WebReadyPDF.pdf (last visited July 27, 2024)(arguing that West Virginia v. EPA crystalized previous expressions of skepticism about “agency assertions of ‘broad and unusual authority through an implicit delegation,’” into a distinct “doctrine”); Kevin O. Leske, Major Questions About the “Major Questions” Doctrine, 5 Mich. J. Env’t & Admin. L. 479, 480 (2016)(“After over a decade of hibernation, the United States Supreme Court has awoken the ‘major questions’ doctrine, which has re-emerged in an expanded form.” (source of quoted material not cited)). Nevertheless, the Court feels comfortable saying that West Virginia v. EPA marks the “rise” of the major questions doctrine, because that case is the first time that the Supreme Court stated that it was applying something called the “major questions doctrine.” W. Virginia v. Env’t Prot. Agency, 597 U.S. at 724. Justice Kavanaugh, when serving as a Judge on the United States Court of Appeals for the District of Columbia Circuit, once referred to something called the “major rules doctrine” -- which he defined by quoting Justice Scalia’s observation that “[w]e expect Congress to speak clearly if it wishes to assign to an agency decisions of vast economic and political significance.” United States Telecom Ass’n v. Fed. Commc’ns Comm’n, 855 F.3d 381, 417 (D.C. Cir. 2017)(Kavanaugh, J., dissenting)(quoting Util. Air Regul. Grp. v. E.P.A., 573 U.S. 302, 324 (2014)).

Quartet, 136 Harv. L. Rev. 262, 263-64 (2022)(arguing that West Virginia v. EPA and its companion cases “unhitched the major questions exception from Chevron, which has been silently ousted from its position as the starting point for evaluating whether an agency can exert regulatory authority”); William N. Eskridge, Jr. et. al., Textualism’s Defining Moment, 123 Colum. L. Rev. 1611, 1675 (2023)(“Recently, the Major Questions Doctrine (MQD) has become a prominent textualist-favored, policy-based exception to Chevron[.]”); Daniel T. Deacon & Leah M. Litman, The New Major Questions Doctrine, 109 Va. L. Rev. 1009, 1020-21 (2023)(“In a set of cases, the [Supreme] Court has suggested either that an issue should not be analyzed using the Chevron framework because Congress did not authorize agencies to resolve the issue due to its majorness, or that the Chevron analysis operates differently because the agency policy is a major one.”). While many questions remain about the application of the major questions doctrine, it is clear that -- at least for “major” questions -- an agency will be presumed to have no authority to act unless Congress has “clearly” conferred on that agency the authority to act, regardless of Chevron deference. West Virginia v. EPA, 597 U.S. at 716.

3. Waiving Sovereign Immunity.

The APA waives sovereign immunity with respect to non-monetary claims. See 5 U.S.C. § 702. The statute provides:

An action in a court of the United States seeking relief other than money damages and stating a claim that an agency or an officer or employee thereof acted or failed to act in an official capacity or under color of legal authority shall not be dismissed nor relief therein be denied on the ground that it is against the United States or that the United States is an indispensable party. The United States may be named as a defendant in any such action, and a judgment or decree may be entered against the United States:

5 U.S.C. § 702. Claims for money damages seek monetary relief “to substitute for a suffered loss.”

Normandy Apartments, Ltd. v. U.S. Dep’t of Hous. & Urban Dev., 554 F.3d 1290, 1298 (10th Cir.

2009)(emphasis in original). Claims that do not seek monetary relief or that seek “specific remedies that have the effect of compelling monetary relief” are not claims for monetary damages. Normandy Apartments, Ltd. v. U.S. Dep’t of Hous. & Urban Dev., 554 F.3d at 1298. To determine whether a claim seeks monetary relief, a court must “look beyond the face of the complaint” and assess the plaintiff’s prime object or essential purpose; “[a] plaintiff’s prime objective or essential purpose is monetary unless the non-monetary relief sought has significant prospective effect or considerable value apart from the claim for monetary relief.” Normandy Apartments, Ltd. v. U.S. Dep’t of Hous. & Urban Dev., 554 F.3d at 1296 (quoting Burkins v. United States, 112 F.3d 444, 449 (10th Cir. 1997)).

The APA’s sovereign immunity waiver for claims “seeking relief other than money damages” does not apply, however, “if any other statute that grants consent to suit expressly or impliedly forbids the relief which is sought.” 5 U.S.C. § 702. The Tucker Act, 28 U.S.C. §§ 1346, 1491, permits district courts to hear some claims against the United States, but it also states that “district courts shall not have jurisdiction of any civil action or claim against the United States founded upon any express or implied contract with the United States.” 28 U.S.C. § 1346(a)(2). It follows that the APA does not waive the United States’ sovereign immunity as to contract claims even when those claims seek relief other than money damages, such as declaratory or injunctive relief. See Normandy Apartments, Ltd. v. U.S. Dep’t of Hous. & Urban Dev., 554 F.3d at 1295. Consequently, two questions determine whether the APA waives the United States’ sovereign immunity as to a particular claim: “First, does [the] claim seek ‘relief other than money damages,’ such that the APA’s general waiver of sovereign immunity is even implicated? Second, does the Tucker Act expressly or impliedly forbid the relief that Normandy seeks, such that the APA’s waiver does not apply?” Normandy Apartments, Ltd. v. U.S. Dep’t of Hous. & Urban Dev., 554

F.3d at 1296 (quoting 5 U.S.C. § 702).

LAW REGARDING THE NEPA

The NEPA requires federal agencies to

include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on --

- (i) the environmental impact of the proposed action,
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (iii) alternatives to the proposed action,
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

42 U.S.C. § 4332(C). “Although labeled an ‘environmental’ statute, NEPA is in essence a *procedural* statute; it does ‘not require agencies to elevate environmental concerns over other appropriate considerations.’” Park Cty. Res. Council, Inc. v. U.S. Dep’t of Agric., 817 F.2d 609, 620 (10th Cir. 1987)(emphasis in original)(quoting Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc., 462 U.S. 87, 97 (1983)). The NEPA’s procedural requirements exist to prevent “precipitous federal decision making at the agency level which may fail to adequately consider the environmental ramifications of agency actions.” Park Cty. Res. Council, Inc. v. U.S. Dep’t of Agric., 817 F.2d at 620. The “NEPA merely prohibits uninformed -- rather than unwise -- agency action.” Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 351 (1989)(Stevens, J.).

Regulations provide guidance on the NEPA’s implementation. See 40 C.F.R. §§ 1500-08. Those regulations are entitled to substantial deference. See Robertson v. Methow Valley Citizens

Council, 490 U.S. 332, 355-56 (1989); Andrus v. Sierra Club, 442 U.S. 347, 358 (1979). Council on Environmental Quality (“CEQ”) regulations set out three ways that agencies can comply with § 4332(C)’s “detailed statement” requirement for “major Federal actions significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(C). First, an agency can satisfy that statutory requirement by preparing a detailed statement, called an EIS, that conforms to regulations regarding its format, content, and methodology. See 40 C.F.R. §§ 1502, 1508.11.

Second, if an agency is unsure whether an EIS is required for a proposed action, i.e., whether the action qualifies as a “major Federal action[] significantly affecting the quality of the human environment,” 42 U.S.C. § 4332(C), the agency may prepare an EA, see 40 C.F.R. §§ 1503(a), 1501.4(b). An EA “provide[s] sufficient evidence and analysis for determining whether to prepare” an EIS or, alternatively, “a finding of no significant impact,” 40 C.F.R. § 1508.9(a)(1), which is “a document . . . briefly presenting the reasons why an action . . . will not have a significant effect on the human environment [such that an EIS] therefore will not be prepared,” 40 C.F.R. § 1508.13. See 40 C.F.R. § 1502.2 (stating that, “[a]s in a finding of no significant impact,” in an EIS’ treatment of “other than significant issues[,] . . . there should be only enough discussion to show why more study is not warranted”). EAs also facilitate the preparation of an EIS when one is necessary, and they help agencies comply with the NEPA when an EIS is not necessary. See 40 C.F.R. § 1508.9(a)(2)-(3). An EA needs to include “brief discussions of the need for the proposal, of alternatives as required by [42 U.S.C. § 4332(E), and] of the environmental impacts of the proposed action and alternatives.” 40 C.F.R. § 1508.9(b). Section 4332(E) requires agencies to “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.” 42 U.S.C. § 4332(E).

Third, an agency can determine that an EIS is not required without needing to prepare an EA when the proposed action falls within a categorical exclusion (“CE”). See 40 C.F.R. § 1508.4. A CE is “a category of actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in [NEPA] procedures adopted by a Federal agency.” 40 C.F.R. § 1508.4. See Utah Env’t Cong. v. Russell, 518 F.3d 817, 821 (10th Cir. 2008); WildEarth Guardians v. U.S. Forest Serv., 668 F. Supp. 2d at 1321-22.

LAW REGARDING THE FLPMA

The FLPMA, formally titled the Federal Land Policy and Management Act of 1976, Pub. L. 94-579, §§ 101-707, 90 Stat. 2743-94 (1976)(codified at 43 U.S.C. §§ 1701 to 1787), announced itself as an act “[t]o establish public land policy; to establish guidelines for its administration; to provide for the management, protection, development, and enhancement of the public lands; and for other purposes,” Pub. L. 94-579, 90 Stat. at 2743. FLPMA is sometimes called the “Organic Act of the Bureau of Land Management,” John A. Carver, Jr., BLM Organic Act, Federal Land Policy and Management Act or 1976: Fruition or Frustration, 54 Denv. L.J. 387, 387 (1977); see Frank Gregg, Symposium on the Federal Land Policy and Management Act: Introduction, 21 Ariz. L. Rev 271, 271 (1979), and is a comprehensive land management statute which guides the Bureau of Land Management (“BLM”) in its regulatory land management duties, Norton v. S. Utah Wilderness All., 542 U.S. 55, 58 (2004)(Scalia, J.) (“For nearly 30 years, BLM’s management of public lands has been governed by the Federal Land Policy and Management Act of 1976 (FLPMA).”). Former BLM director Neil Kornze wrote in his introduction to a republication of the FLPMA in 2014:

The Federal Land Policy and Management Act is central to everything we do at the Bureau of Land Management. All of the actions we take rely on the authorities that were built into this law by Congress and the President. We use FLPMA every day to guide our management of over 10 percent of the land in the United States and one-third of the nation's minerals.

Bureau of Land Management, The Federal Land Policy and Management Act of 1976, A Forward by the Director at iii (September 2016), available at The Federal Land Policy and Management Act of 1976 as amended (blm.gov) (last visited August 19, 2024). Among other things, the FLPMA directs that the Secretary of the Interior, “with respect to the public lands, shall promulgate rules and regulations to carry out the purposes of this Act and of other laws applicable to the public lands,” and also mandates that “the Secretary of Agriculture, with respect to lands within the National Forest System, shall promulgate rules and regulations to carry out the purposes of this Act.” 43 U.S.C. § 1740. To aid this rule-making obligation, the FLPMA provides the following Congressional declaration of policy:

- (a) The Congress declares that it is the policy of the United States that --
 - (1) the public lands be retained in Federal ownership, unless as a result of the land use planning procedure provided for in this Act, it is determined that disposal of a particular parcel will serve the national interest;
 - (2) the national interest will be best realized if the public lands and their resources are periodically and systematically inventoried and their present and future use is projected through a land use planning process coordinated with other Federal and State planning efforts;
 - (3) public lands not previously designated for any specific use and all existing classifications of public lands that were effected by executive action or statute before October 21, 1976, be reviewed in accordance with the provisions of this Act;
 - (4) the Congress exercise its constitutional authority to withdraw or otherwise designate or dedicate Federal lands for

specified purposes and that Congress delineate the extent to which the Executive may withdraw lands without legislative action;

(5) in administering public land statutes and exercising discretionary authority granted by them, the Secretary be required to establish comprehensive rules and regulations after considering the views of the general public; and to structure adjudication procedures to assure adequate third party participation, objective administrative review of initial decisions, and expeditious decisionmaking;

(6) judicial review of public land adjudication decisions be provided by law;

(7) goals and objectives be established by law as guidelines for public land use planning, and that management be on the basis of multiple use and sustained yield unless otherwise specified by law;

(8) the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use;

(9) the United States receive fair market value of the use of the public lands and their resources unless otherwise provided for by statute;

(10) uniform procedures for any disposal of public land, acquisition of non-Federal land for public purposes, and the exchange of such lands be established by statute, requiring each disposal, acquisition, and exchange to be consistent with the prescribed mission of the department or agency involved, and reserving to the Congress review of disposals in excess of a specified acreage;

(11) regulations and plans for the protection of public land areas of critical environmental concern be promptly developed;

(12) the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands including implementation of the Mining

and Minerals Policy Act of 1970 (84 Stat. 1876, 30 U.S.C. 21a) as it pertains to the public lands; and

(13) the Federal Government should, on a basis equitable to both the Federal and local taxpayer, provide for payments to compensate States and local governments for burdens created as a result of the immunity of Federal lands from State and local taxation.

(b) The policies of this Act shall become effective only as specific statutory authority for their implementation is enacted by this Act or by subsequent legislation and shall then be construed as supplemental to and not in derogation of the purposes for which public lands are administered under other provisions of law.

43 U.S.C. § 1701. The FLPMA also contains, at 43 U.S.C. § 1702, a definitions section, which defines -- among other things -- the central FLPMA concepts of “multiple use” and “sustained yield”:

(c) The term “multiple use” means the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output.

....

(h) The term “sustained yield” means the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use.

43 U.S.C. § 1702. See Norton v. S. Utah Wilderness All., 542 U.S. at 58 (“‘Multiple use management’ is a deceptively simple term that describes the enormously complicated task of

striking a balance among the many competing uses to which land can be put, ‘including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and . . . natural scenic, scientific and historical values.’” (quoting 43 U.S.C. § 1702(c)); Norton v. S. Utah Wilderness All., 542 U.S. at 58 (“A second management goal, ‘sustained yield,’ requires BLM to control depleting uses over time, so as to ensure a high level of valuable uses in the future.” (quoting 43 U.S.C. § 1702(c))).

ANALYSIS

The Court undertakes its analysis in six sections. First, the Court determines that the Plaintiffs have standing to bring their claims under the APA, the NEPA, and the FLPMA. Second, the Court analyzes the Plaintiffs’ leading argument on the merits, and concludes that: (i) the BLM took a NEPA-mandated hard look at the reasonably foreseeable impacts to air quality that arise from the Mining Project’s Processing Mill; (ii) the BLM took a hard look at the Processing Mill’s impacts to water quantity; (iii) the BLM did not, however, take a hard look at the Processing Mill’s impacts to water quality; and (iv) the BLM took a hard look at the environmental impacts related to the ore’s transportation from the Mining Project site to the Processing Mill. Having concluded that the BLM did not take a NEPA-mandated hard look at the Processing Mill’s impacts to water quality, Section II also concludes, pursuant to the Allied-Signal test, that the Court will remand -- but not vacate -- the BLM’s decision in this case, so that the BLM can address the EA’s deficiencies. Third, the Court discusses the Plaintiffs’ reasonable alternatives argument and concludes that the EA adequately considered alternatives to the Mining Project under the NEPA. Fourth, the Court considers the Plaintiffs’ argument regarding baseline conditions, and concludes that the EA adequately considers the relevant baseline conditions pursuant to the NEPA. Fifth, the Court analyzes the Plaintiffs’ first FLPMA-related argument, and concludes that the BLM’s

simultaneous approval of the exploration and the full mine does not violate the FLPMA. Last, the Court analyzes the Plaintiffs' argument that the BLM's approval of the Mining Project -- given the level of detail provided about the Processing Mill -- violates the FLMPA and concludes that the BLM's approval does not violate the FLPMA.

I. THE PLAINTIFFS HAVE STANDING.

Although the Federal Defendants do not contest -- or even discuss -- the Plaintiffs' standing in the Federal Defendants' Brief, the Plaintiffs assert standing arguments in their brief, see Plaintiffs' Brief at 17-19, and the Court has a duty to consider standing for jurisdictional purposes, see Rector v. City & Cnty. of Denver, 348 F.3d 935, 942 (10th Cir. 2003)(McConnell, J.)("Standing . . . raises jurisdictional questions and we are required to consider 'the issue *sua sponte* to ensure that there is an Article III case or controversy' before us." (quoting PeTA, People for the Ethical Treatment of Animals v. Rasmussen, 298 F.3d 1198, 1202 (10th Cir. 2002)(emphasis in Rector v. City & Cnty. of Denver, but not in PeTA, People for the Ethical Treatment of Animals v. Rasmussen))). Accordingly, the Court discusses standing before reaching this appeal's merits. For the reasons that follow, the Court concludes that all five of the Plaintiff environmental groups have standing to proceed with this federal court litigation.

As the Court discusses above, see Law Regarding Standing, supra, at 125-28, Article III of the Constitution limits federal jurisdiction to "Cases" and "Controversies," U.S. Const. art. III, § 2. To establish standing, a plaintiff must show three things: "(1) 'an injury in fact that is both concrete and particularized as well as actual or imminent'; (2) a causal relationship between the injury and the challenged conduct; and (3) a likelihood that the injury would be redressed by a favorable decision." Protocols, LLC v. Leavitt, 549 F.3d 1294, 1298 (10th Cir. 2008)(Hartz, J.)(quoting Wyoming ex rel. Crank v. United States, 539 F.3d 1236, 1241 (10th Cir. 2008)). In cases involving

an organization’s Article III standing, the organization has standing “if it can show at least one of its members meets the requirements for Article III standing.” Rocky Mountain Wild v. Dallas, 98 F.4th 1263, 1286 (10th Cir. 2024)(citing Summers v. Earth Island Inst., 555 U.S. 488, 498 (2009)). The plaintiff bears the burden of establishing standing. See, e.g., Steel Co. v. Citizens for a Better Env’t, 523 U.S. 83, 104 (1998).

The Court begins with the injury requirement. In undertaking this analysis, the Court is mindful that, in NEPA cases, “the harm itself need not be immediate, as ‘the federal project complained of may not affect the concrete interest for several years.’” Sierra Club v. U.S. Dep’t of Energy, 287 F.3d 1256, 1265 (10th Cir. 2002)(quoting Comm. to Save the Rio Hondo v. Lucero, 102 F.3d 445, 449 n.4 (10th Cir. 1996)). See Lujan v. Defs. of Wildlife, 504 U.S. 555, 573 n.7 (1992). Moreover, as the Supreme Court has noted, while an environmental group’s assertion of “generalized harm to the forest or the environment will not alone support standing, if that harm in fact affects the recreational or even the mere esthetic interests of the plaintiff, that will suffice.” Summers v. Earth Island Inst., 555 U.S. at 494 (citing Sierra Club v. Morton, 405 U.S. 727, 734-36 (1972)). In this case, declarations in the record establish that the BLM’s allegedly unlawful decision to approve the Mining Project will injure individual members of all five Plaintiff environmental groups. Wesley Light, the President and a Steering Committee Member of the Floridas Friends, discusses his frequent visits to the Mining Project area to “view[] the natural landscapes, find[] solitude, photograph[] native plants and animals, hik[e], camp[], and hunt[,]” and that these uses “will be immediately and significantly affected by the Project.” Light Decl. ¶ 4, at 3. Lee G. Pattison, a Wilderness Alliance member, similarly states that he has “explored the area where the 40-acre mine site was approved by BLM as well as the adjacent part of the WSA,” and also that he has seen a herd of Ibex, “not far from this proposed mine site,” Pattison

Decl. ¶ 5, at 3, but that if the Mining Project moves forward, “it would definitely end [his] use of the lands at and near the site,” Pattison Decl. ¶ 7, at 4. See S. Utah Wilderness All. v. Off. of Surface Mining Reclamation & Enft, 620 F.3d 1227, 1233 (10th Cir. 2010)(“[T]he desire to use or observe an animal species, even for purely esthetic purposes, is undeniably a cognizable interest for the purpose of standing.” (quoting Lujan v. Defs. of Wildlife, 504 U.S. 562-63)). Michael P. Berman, a WildEarth Guardians member and professional landscape photographer, see Berman Decl. ¶¶ 3-4, at 3, has spent significant time photographing and hunting in the areas around the proposed Mining Project, but declares that “[d]eveloping a mine right in the belly of the foothills would forever change its character, and deter both the work I do there and the pleasure I take in visiting and recreating in the areas, within, adjacent to, and around the Mine that will be affected by mining activities,” Berman Decl. ¶ 5, at 3. Allyson Siwik, the Executive Director of Gila Resources, states that she uses and enjoys “the lands around the proposed American Magnesium Foothills Mine” for various aesthetic and recreational purposes, Siwik Decl. ¶ 10, at 4, and states that these forms of recreation “will be adversely affected by the Mine’s noise, wildlife disturbances, truck traffic, and visual blight,” Siwik Decl. ¶ 10, at 4. Last, Joseph A. Zupan, an Amigos Bravos member, states that he has “explored the area where the 40-acre mine site was approved by BLM as well as the adjacent part of the WSA,” where he “hiked, photographed, and enjoyed the peace and quiet of these lands.” Zupan Decl. ¶ 5, at 3. He states that “[a]ny disturbance” to this area will “negatively affect the lands at the site as well as the adjoining WSA, including to the peace and quiet and other aesthetic values and uses I enjoy, as well as to wildlife habitat,” Zupan Decl. ¶ 5, at 3, and that the Mining Project will “ruin” his “enjoyment of the area,” Zupan Decl. ¶ 7, at 3. These sworn declarations by members of all five Plaintiff environmental groups demonstrate an injury in fact that is sufficient for standing purposes in this context. See S.

Utah Wilderness All. v. Off. of Surface Mining Reclamation & Enf't, 620 F.3d at 1234 (“In an environmental case . . . a plaintiff need only show that he used the affected area, and that he is an individual for whom the aesthetic and recreational values of the area are lessened by the defendant’s activity.”) (quoting Piney Run Pres. Ass’n v. Cnty. Comm’rs of Carroll Cnty., 268 F.3d 255, 263 (4th Cir. 2001))).

The other two prongs of standing are also met. As for traceability, all five environmental group declarants state that their harm is the result of the future Mining Project and -- by extension -- the BLM’s allegedly unlawful decision to approve the Mining Project. See Light Decl. ¶ 4, at 3; Pattison Decl. ¶ 7, at 4; Berman Decl. ¶ 5, at 3; Siwik Decl. ¶ 10, at 4; Zupan Decl. ¶¶ 5-7, at 3. The BLM is responsible for the Mining Project’s approval, and thus there exists no other cause for the Plaintiffs’ harm than the agency’s allegedly unlawful decision-making. See S. Utah Wilderness All. v. Off. of Surface Mining Reclamation & Enf’t, 620 F.3d at 1233 (“The element of traceability requires the plaintiff to show that the defendant is responsible for the injury, rather than some other party not before the court.”); Hydro Res., Inc. v. U.S. E.P.A., 608 F.3d 1131, 1144 n.8 (10th Cir. 2010)(en banc, Gorsuch, J.). Last, the Court concludes that the Court can redress the Plaintiffs’ harms. In the NEPA context, “‘the normal standards for redressability’ are relaxed; a plaintiff need not establish that the ultimate agency decision would change upon National Environmental Policy Act compliance.” Comm. to Save the Rio Hondo v. Lucero, 102 F.3d at 452 (quoting Lujan v. Defs. of Wildlife, 504 U.S. 555, 573 n.7). The Plaintiffs state that, if the BLM conducts a proper analysis of the Mining Project, in accordance with the NEPA and the FLPMA, “[t]his analysis could lead to denial of the Project, or to modifications that would lessen the Project’s environmental impacts.” Plaintiffs’ Brief at 19. Accordingly, if the Court vacates the BLM’s approval of the Mining Project, there is a substantial likelihood that the harm will be

redressed. “That the [BLM] may ultimately make the same decision . . . is immaterial” for redressability purposes. Catron Cnty. Bd. of Comm’rs v. U.S. Fish & Wildlife Serv., 75 F.3d 1429, 1433 (10th Cir. 1996). The Court thus concludes that the Plaintiffs have Article III standing to pursue this litigation.

II. THE BLM DOES NOT COMPLY WITH THE NEPA IN PREPARING THE EA, BECAUSE IT FAILS TO TAKE THE REQUIRED “HARD LOOK” AT THE PROCESSING MILL’S REASONABLY FORESEEABLE ENVIRONMENTAL IMPACTS TO WATER QUALITY.

Next, the Court turns to the Plaintiffs’ first argument on the merits. As the Court describes in detail above, see Procedural Background Section 2.a.ii, supra, at 73-88; id. Section 2.d, supra, at 110-18, the Plaintiffs assert that, in reviewing and approving the Mining Project, the BLM fails to take the NEPA-mandated “hard look” at the “indirect and cumulative impacts” from the Mining Project’s conceptual Processing Mill, Plaintiffs’ Brief at 26; see id. at 26-33. To evaluate this argument, the Court first outlines the requirements of NEPA’s “hard look” mandate, and the Court also discusses the applicable standard of review. Next, the Court breaks the Plaintiffs’ hard look argument into three parts: (i) whether the BLM took a hard look at the Processing Mill’s impacts to air quality; (ii) whether the BLM took a hard look at the Processing Mill’s impacts to water quantity and water quality; and (iii) whether the BLM took a hard look at the environmental impacts related to the transportation of the ore from the Mining Project site to the Processing Mill. Last, because the Court concludes that the BLM fails to take the NEPA-required “hard look” at the Processing Mill’s environmental impacts to water quality, the Court then considers the appropriate remedy for the BLM’s NEPA violation, and concludes that, under the Allied-Signal test -- which the Tenth Circuit recently has adopted, see Diné Citizens Against Ruining Our Env’t

v. Haaland, 59 F.4th at 1025, 1049 -- remand without vacatur is the appropriate remedy in this instance.

A. UNDER THE NEPA, THE AGENCY MUST TAKE A “HARD LOOK” AT ENVIRONMENTAL IMPACTS, AND THE COURT REVIEWS THIS AGENCY ACTION UNDER AN ARBITRARY-AND-CAPRICIOUS STANDARD.

The NEPA’s “hard look” requirement is anchored in Supreme Court case law, which instructs that “[t]he sweeping policy goals announced in § 101 of NEPA^[45] are . . . realized through a set of ‘action-forcing’ procedures that require that agencies take a ‘hard look’ at environmental consequences.” Robertson v. Methow Valley Citizens Council, 490 U.S. at 350 (quoting Kleppe v. Sierra Club, 427 U.S. at 410 n.21). “While the parameters of the ‘hard look’ standard have not been defined with granular precision, the aim of the requirement is clear: an agency must identify and evaluate ‘the adverse environmental effects of the proposed action.’” Ctr. for Biological Diversity v. U.S. Dep’t of the Interior, 72 F.4th 1166, 1191 (10th Cir. 2023)(Rossman, J., concurring in part and dissenting in part)(quoting Robertson v. Methow Valley Citizens Council, 490 U.S. at 350). More concretely, in taking a “hard look” at environmental consequences, agencies “must consider the direct, indirect, and cumulative environmental impacts of the proposed action.” Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1034 (citing 40 C.F.R. §§ 1502.16, 1508.7, 1508.8 (2019)⁴⁶). “In each of these contexts, the agency

⁴⁵Section 101 of the NEPA is the Act’s “Declaration of National Environmental Policy,” Pub. L. No. 91-190, § 101, 83 Stat. 852, 852 (1070), codified at 42 U.S.C. § 4331.

⁴⁶The Tenth Circuit recently has noted:

The Council on Environmental Quality updated the NEPA regulations in 2020, *see* 85 Fed. Reg. 43,304 (July 16, 2020), and recently amended certain of the Regulations, *see* 87 Fed. Reg. 23,453 (Apr. 20, 2022). [The Agency’s] actions are

must evaluate the ‘ecological, . . . economic, [and] social’ impacts of a proposed action.” Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1034 (quoting High Country Conservation Advocs. v. U.S. Forest Serv., 52 F. Supp. 3d 1174, 1190 (D. Colo. 2014)(Jackson, J.)). Moreover, as the Tenth Circuit instructs, “[w]hen ‘considering whether the agency took a hard look, we consider only the agency’s reasoning at the time of decisionmaking, excluding post-hoc rationalization concocted by counsel in briefs or argument.’” Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1034 (quoting New Mexico ex rel. Richardson v. Bureau of Land Mgmt., 565 F.3d at 704)).

“Hard look,” however, is not itself a standard of review that a reviewing court applies -- that is, a reviewing court does not itself take a “hard look” at the reviewed agency’s action⁴⁷ -- and, because the NEPA “does not create a cause of action, . . . NEPA challenges are brought under the APA.” Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1029. Accordingly, 5 U.S.C. § 706(A)(2)’s arbitrary-and-capricious standard governs the Court’s review in this case. See 5 U.S.C. § 706(A)(2) (stating that a reviewing court “shall . . . hold unlawful and set aside

subject to the previous regulations because the actions were all completed prior to the effective date of the new regulations and because Reclamation applied the prior regulations. *See Bair v. Cal. Dep’t of Transp.*, 982 F.3d 569, 577 n.20 (9th Cir. 2020)(“Because [the agency at issue] applied the previous [NEPA] regulations to the Project, so do we.”). All citations to NEPA regulations are to those in effect before September 14, 2020.

Ctr. for Biological Diversity v. U.S. Dep’t of the Interior, 72 F.4th 1166, 1178 n.6 (10th Cir. 2023)(Tymkovich, J.)(first brackets added, second and third alterations in Ctr. for Biological Diversity v. U.S. Dep’t of the Interior). The same analysis applies in this case, and thus “the previous regulations [apply] because the actions were all completed prior to the effective date of the new regulations and because [BLM] applied the prior regulations.” Ctr. for Biological Diversity v. U.S. Dep’t of the Interior, 72 F.4th at 1178 n.6.

⁴⁷But see footnote 48, *infra*, at 162 (discussing the multiple meanings of “hard look”).

agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law”). An agency action is arbitrary and capricious under § 706(A)(2) if

the agency “has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency,” or if the agency action “is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.”

Copar Pumice Co. v. Tidwell, 603 F.3d 780, 793 (10th Cir. 2010)(quoting Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983)(White, J.)). The Court performs this assessment with a presumption of validity regarding the agency’s action, and it is the challenger who “‘bears the burden of persuasion’ to show that the agency action is arbitrary and capricious.” Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1029 (10th Cir. 2023)(quoting N.M. Health Connections v. U.S. Dep’t of Health & Hum. Servs., 946 F.3d 1138, 1162 (10th Cir. 2019)).

As a final point, the Tenth Circuit recently has instructed that NEPA’s “hard look” requirement does not impose “‘a requirement going beyond the APA standard of review’ or apply[] a ‘heightened standard.’” Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1034 n.7 (quoting WildEarth Guardians v. Conner, 920 F.3d at 1257 n.2).⁴⁸ As the Court understands

⁴⁸The Court observes that the concept of “hard look” appears to have at least two different meanings. In the Tenth Circuit -- following the Supreme Court’s statement in Robertson v. Methow Valley Citizens Council, 490 U.S. at 350 -- the term refers to a requirement that the NEPA imposes, i.e., taking a “hard look” is something that the NEPA requires of agencies. See Utah Shared Access All. v. U.S. Forest Serv., 288 F.3d 1205, 1207 (10th Cir. 2002)(Brown, J., sitting by designation)(stating that the NEPA requires that “the agency take a ‘hard look’ at the environmental consequences before taking a major action” (quoting Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc., 462 U.S. 87, 97 (1983)(O’Connor, J.)). On the other hand, a line of cases from the United States Court of Appeals for District of Columbia Circuit uses the term to

describe the 5 U.S.C. § 706(A)(2) standard of review, even in cases unrelated to the NEPA. E.g., Ramirez v. U.S. Immigr. & Customs Enf't, 471 F. Supp. 3d 88, 98 (D.D.C. 2020)(Contreras, J.)(“Although [arbitrary and capricious] is a deferential standard, it still requires a reviewing court to take a ‘hard look’ at an agency’s reasoning.” (quoting Harry T. Edwards, Linda A. Elliott & Marin K. Levy, The Requirement of Reasoned Decisionmaking: Arbitrary and Capricious Review Under the APA, Federal Standards of Review Ch. XV (Apr. 2013)). See Jack Beermann, Inside Administrative Law at 125 (2nd ed. 2020)(“The arbitrary, capricious standard is sometimes referred to as ‘hard look’ review.” (source of quoted material not cited)). In an opinion that the Honorable Patricia Wald, United States Circuit Judge for the United States Court of Appeals for District of Columbia Circuit, authored, Judge Wald carefully outlines the history of this term, when used in this second sense:

The phrase “hard look” derives from Judge Leventhal’s opinions in Greater Boston Television Corp. v. FCC, 444 F.2d 841 (D.C. Cir. 1970), cert. denied, 403 U.S. 923 . . . (1971), and Pike’s Peak Broadcasting Co. v. FCC, 422 F.2d 671 (D.C. Cir.), cert. denied, 395 U.S. 979 . . . (1969). As originally articulated the words “hard look” described the agency’s responsibility and not the court’s. However, the phrase subsequently evolved to connote the rigorous standard of judicial review applied to increasingly utilized informal rulemaking proceedings or to other decisions made upon less than a full trial-type record. Judge Leventhal himself used the phrase in this sense in Maryland-Nat’l Capital Park and Planning Comm’n v. United States Postal Serv., 487 F.2d 1029, 1037-38 and n.4 (D.C. Cir. 1973).

The etymological evolution of the phrase “hard look” and of other capsule descriptions of standards stated on judicial review of administrative decisions is in no small part attributable to the shifting meaning of “informal rulemaking.” The transformation in informal rulemaking proceedings in turn can be traced to the more rigorous standards of review applied.

As originally conceived, “notice and comment” rulemaking provided a scant “record” for review. The statutorily required rationale consisted merely in “a concise general statement of (the rule’s) basis and purpose.” 5 U.S.C. § 553(c) (1976). The cumbersomeness of rulemaking “on the record” and its attendant delays prompted increased provision for the more flexible and expedient “notice and comment” rules in areas in urgent need of regulation. See Pedersen, Formal Records and Informal Rulemaking, 85 Yale L.J. 38, 39 (1975)(hereinafter cited as Pedersen).

The sheer massiveness of impact of the urgent regulations issued under the new rulemaking provisions and the diffidence of judges in the face of highly technical regulatory schemes prompted the courts to require the agencies to develop a more complete record and a more clearly articulated rationale to facilitate review for arbitrariness and caprice. See Kennecott Copper Corp. v. EPA, 462 F.2d 846,

it, this instruction means that it is the role of the Court to review -- under an arbitrary-and-capricious standard -- whether the agency took the NEPA-required “hard look” at “the direct, indirect, and cumulative environmental impacts of the proposed action.” Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1034 (citing 40 C.F.R. §§ 1502.16, 1508.7, 1508.8).

849-50 (D.C. Cir. 1972)(remand of national secondary ambient air quality standards to EPA for additional rationale); K. Davis, Administrative Law of the Seventies, s 29.01-6 (1976); Stewart, Vermont Yankee and the Evolution of Administrative Procedure, 91 Harv. L. Rev. 1805, 1812-13 (1978); Nathanson, Probing the Mind of the Administrator: Hearing Variations and Standards of Judicial Review Under the Administrative Procedure Act and Other Federal Statutes, 75 Colum. L. Rev. 721, 746-70 (1975). (Indeed, a section of the Clean Air Act Amendments of 1977 not applicable to the instant proceedings expressly codified much of prior law and the suggestions made in Pedersen concerning the “formalization” of records in informal rulemaking. 42 U.S.C. s 7607(d) (Supp. I 1977); H.R.Rep.No.294, 95th Cong., 1st Sess. 320 (1977), reprinted in 4 Legislative History at 2787.)

As these newly-required records and rationales became more routinely available, the “hard look” taken began to appear more judicial than administrative, blurring the original meaning of that phrase. The availability for judicial review of substantial administrative records has also generated both confusion and controversy over the applicable standard of review under the Administrative Procedure Act. See generally DeLong, Informal Rulemaking and the Integration of Law and Policy, 65 Va. L. Rev. 257, 284-89 (1979); Auerbach, Informal Rulemaking: A Proposed Relationship Between Administrative Procedures and Judicial Review, 72 Nw. U. L. Rev. 15 (1977); Pedersen, at 46-49.

Nat’l Lime Ass’n v. Env’t Prot. Agency, 627 F.2d 416, 451 n.126 (D.C. Cir. 1980). In short, as this discussion reveals, in the D.C. Circuit “hard look” does, at least in some contexts, refer to a standard of review. Contra Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1034 n.7 (explaining that “hard look” requirement does not impose “‘a requirement going beyond the APA standard of review’ or apply[] a ‘heightened standard’” (quoting WildEarth Guardians v. Conner, 920 F.3d at 1257 n.2)).

B. THE BLM TOOK A HARD LOOK AT THE PROCESSING MILL'S IMPACTS ON AIR QUALITY, WATER QUANTITY, AND THE IMPACTS RELATED TO THE TRANSPORTATION OF THE ORE FROM THE MINING PROJECT SITE TO THE PROCESSING MILL, BUT THE BLM FAILS TO TAKE A HARD LOOK AT THE PROCESSING MILL'S IMPACTS TO WATER QUALITY.

As the Court notes above, the Plaintiffs allege that the BLM failed to take a “hard look” at the “indirect and cumulative impacts” from the Mining Project’s conceptual Processing Mill.

Plaintiffs’ Brief at 26. See Plaintiffs’ Brief at 26-33. More specifically, the Plaintiffs state:

Outside of a vague intention to construct and operate the mill at a vacant-land site north of Deming, and some generalized mention of potential processing methods, the record contains no details of the milling and its impacts, including of the site conditions, of the air and water pollution from the mill, of the waste dumping and byproducts from the milling, of the sources of water needed for the mill (and impacts from water withdrawals in the area), and of impacts to the Deming communities that will bear the brunt of the ore hauling and industrial truck traffic.

Plaintiffs’ Brief at 29. The Court organizes these “hard look” grievances into three categories:

(i) whether the BLM took a hard look at the Processing Mill’s impacts on air quality; (ii) whether the BLM took a hard look at the Processing Mill’s impacts on water quantity and water quality; and (iii) whether the BLM took a hard look at the environmental impacts related to the ore’s transportation from the Mining Project site to the Processing Mill.

1. The BLM’s Analysis of the Processing Mill’s Impacts on Air Quality is Sufficient Under the NEPA.

In support of their contention that the EA provides sufficient discussion and analysis of the Processing Mill’s impacts on air quality, the Federal Defendants cite to a seven-page section of the EA in which they contend the EA analyzes “impacts to air quality and climate change from transportation and processing of the ore.” Federal Defendants’ Brief at 16 (citing EA at 37-45 (AR 0000000053-0000000061)). The cited portion of the EA largely focuses on the potential impacts

of fugitive dust -- or particulate matter (PM₁₀) -- emissions from activity at the Mining Project site, although the EA's aggregate analysis incorporates that transportation of the ore to the milling site and "[b]aghouse technology for offsite crushing" will contribute to the environmental impact of PM₁₀. EA at 37 (AR 0000000053). The Federal Defendants also cite to the Air Quality Impacts Memo, which a third-party consultant group prepared and is attached as Appendix C to the EA. See Memo, to John Ayarbe from Paul Wade (dated May 6, 2020), RE: Analysis of Air Quality Impacts from the Foothill Dolomite Mine Project at 1-35 (AR 0000008756-0000008788)("Air Quality Impacts Memo."). The Air Quality Impacts Memo. also contains discussion and analysis of air quality impacts from the transportation and processing of the ore, but also limits that impact's analysis to particulate matter. See Air Quality Memo. at 12-20 (AR 000000008765-000000008733).

The EA's analysis of the air quality impacts, however, is not limited to particulate matter's air quality impacts. The EA also discusses the impacts that the Processing Mill's greenhouse gas emissions cause, largely focusing on carbon dioxide (CO₂). See EA at 46-48 (AR 0000000062-0000000064). As noted, the EA estimates "that the smelting process would result in 181,000 tons of CO₂ per year (0.16 MMT^[49] of CO₂e)," EA at 48 (AR 0000000064), which "would result in a 14% increase in emissions from the magnesium industry and a 0.17% increase in the metals sector," EA at 48 (AR 0000000064). In addition to CO₂ emissions, the EA states that the conceptual mill site processing "could emit 60 tons of SF₆^[50] per year," EA at 48 (AR

⁴⁹MMT stands for "million metric tons." EA at 47 (AR 0000000063).

⁵⁰Again, SF₆ is sulfur hexafluoride, "an inorganic compound" which is "colorless, odorless, non-flammable, and non-toxic gas," and has "an octahedral geometry, consisting of six fluorine

0000000064), which the EA describes as a “trace” greenhouse gas, EA at 46 (AR 0000000062). According to the EA, SF₆ has a global warming potential “22,800 times as strong as CO₂ and a 3,200-year atmospheric lifetime,” and “is considered have an extreme effect on the ozone layer.” EA at 48 (AR 0000000064). A feasibility report for the conceptual mill site Processing Mill recommends “substitution of SF₆ with a non-GHG when technology permits,” because “reducing SF₆ emissions would yield significant environmental benefits.” EA at 48 (AR 0000000064).

In addition to these discussions of particulate matter, CO₂, and SF₆, the EA also references the National Ambient Air Quality Standards (“NAAQS”) that the Clean Air Act, 42 U.S.C. §§ 7401 to 7675 (“CAA”), provides. The EA explains the “six nationally regulated ambient air pollutants” that the EPA is responsible for regulating “carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), PM₁₀, particulate matter equal to or less than 2.5 microns in diameter (PM_{2.5}), sulfur dioxide (SO₂), and lead (Pb).” EA at 38 (AR 0000000054). The EA also states:

The EPA has delegated the responsibility of regulation and enforcement of the NAAQS to the state level and has approved the New Mexico State Implementation Plan (SIP), which allows the State to enforce both the New Mexico Ambient Air Quality Standards (NMAAQs) and the NAAQS on all public and private land with the exception of tribal land and land within Bernalillo County.

EA at 38 (AR 0000000054). The EA states that “[a]reas that are in attainment of the NAAQS are categorized as either Class I, Class II, or Class III, which determines the increment of air quality deterioration allowed,” and, for the Mining Project Area, “[t]he Luna County analysis area is in attainment for the NAAQS, and the NMAAQs and is categorized as a Class II area.” EA at 38 (AR 0000000054). The EA also states that, a separate national air quality metric -- the Air Quality

atoms attached to a central sulfur atom.” Sulfur hexafluoride, Wikipedia, https://en.wikipedia.org/wiki/Sulfur_hexafluoride (last visited July 17, 2024).

Index (“AQI”) -- indicates that “AQI values for Luna County were mainly in the good range . . . with 96% of the days having an AQI in that range.” EA at 39 (AR 0000000055). The EA states that “emissions from mobile and stationary sources” related to the Mining Project “would comprise a very small proportion of total Luna County emissions and would not result in NAAQS exceedances.” EA at 9 (AR 0000000025). The Federal Defendants state that this description of the NAAQS and NMAAQs standards, and the AQI values, is an “analysis of air quality by reference.” Federal Defendants Brief at 16.

In sum, as it pertains to the air quality impacts from the conceptual Processing Mill, the EA and the Air Quality Memo. provide discussion and analysis of the impacts of three pollutants -- particulate matter, CO₂, and SF₆ -- and a general discussion of national air quality standards, which avers that the current air quality metrics in the Mining Project’s area are within the parameters that the NAAQS and the NMAAQs allow, which the AQI considers “good,” EA at 39 (AR 0000000055), and also that the Mining Project “would comprise a very small proportion of total Luna County emissions and would not result in NAAQS exceedances,” EA at 9 (AR 0000000025). In the Plaintiffs’ view, however, these discussions and analyses are necessary, but not sufficient, to fulfill the BLM’s obligations under the NEPA. According to the Plaintiffs, the EA is entirely bereft of discussion or analysis of “**other** pollution emissions from the mill,” such as the other criteria air pollutants under the Clean Air Act: ““carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), . . . sulfur dioxide (SO₂), and lead (Pb).”” Plaintiffs’ Reply at 8 (quoting EA at 38 (AR 0000000054))(emphasis in Plaintiffs’ Reply).

The Court concludes that the EA’s discussion of the Processing Mill’s impacts on air quality constitutes an adequate “hard look” under the NEPA. Utah Shared Access All. v. U.S. Forest Serv., 288 F.3d at 1208. The Court concludes that the EA’s focus on the Processing Mill’s

relevant pollutants -- particulate matter, CO₂, and SF₆ -- has a well-reasoned “rational basis.” Silverton Snowmobile Club v. U.S. Forest Serv., 433 F.3d 772, 782 (10th Cir. 2006). Namely, as the EA notes repeatedly, PM₁₀ is the “main pollutant of concern” in Luna County, and states that, “because the project would result in surface disturbance and would include activities such as blasting and ore processing that have potential to result in increased dust, the BLM determined the EA would examine in detail the potential impact from particulate matter.” EA at 9 (AR 0000000025). On the other hand, as for the other CAA criteria air pollutants, the EA states that “emissions from mobile and stationary sources would comprise a very small proportion of total Luna County emissions and would not result in NAAQS exceedances.” EA at 9 (AR 0000000025). As for CO₂, and SF₆, the EA discusses the impacts from these pollutants, because American Magnesium’s Conceptual Feasibility Study indicates that CO₂, and SF₆ are the two greenhouse gases that are the magnesium processing’s waste byproducts. See Conceptual Feasibility Report at 62-64 (AR 0000004774-0000004776)). Notably, the Conceptual Feasibility Report does not indicate that the Processing Mill would emit any of the other CAA criteria air pollutants. Conceptual Feasibility Report at 62-64 (AR 0000004774-0000004776). Again, the EA’s analysis, accordingly, states that the Mining Project’s “emissions from mobile and stationary sources” -- including indirect impacts -- “would not result in NAAQS exceedances.” EA at 9 (AR 0000000025).

The Court affords “a presumption of validity” to the BLM’s choice to focus on the impacts of particulate matter, CO₂, and SF₆, when conducting its air quality impact analysis. Kobach v. U.S. Election Assistance Comm’n, 772 F.3d 1183, 1197 (10th Cir. 2014). This presumption is “especially strong where the challenged decisions involve technical or scientific matters within the agency’s area of expertise.” Utah Env’t Cong. v. Russell, 518 F.3d 817, 824 (10th Cir. 2008). To

challenge this presumption, the Plaintiffs “bear[] the burden of persuasion,” N.M. Health Connections v. U.S. Dep’t of Health & Hum. Servs., 946 F.3d 1138, 1162 (10th Cir. 2019), to demonstrate that the BLM’s decisions, ““even though based on scientific expertise, are not reasoned,”” Heal Utah v. U.S. Env’t Prot. Agency, 77 F.4th 1275, 1286 (10th Cir. 2023)(quoting Defs. of Wildlife v. Babbitt, 958 F. Supp. 670, 679 (D.D.C. 1997)(Kessler, J.)).

The Plaintiffs’ main challenge to the BLM’s analysis of the Processing Mill’s air impacts is that it provides no analysis of the “**other** pollution emissions from the mill,” such as the other criteria air pollutants under the Clean Air Act: ““carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), . . . sulfur dioxide (SO₂), and lead (Pb).”” Plaintiffs’ Reply at 8 (quoting EA at 38 (AR 0000000054))(emphasis in Plaintiffs’ Reply). The Court concludes that this alleged shortcoming does not render the EA arbitrary and capricious, because the BLM’s decision to focus only on particulate matter, CO₂, and SF₆ is well-reasoned, and finds support in the fact that PM₁₀ is the “main pollutant of concern” in Luna County, EA at 9 (AR 0000000025), and that CO₂ and SF₆ are the two greenhouse gases that magnesium processing produces, see Conceptual Feasibility Report at 62-64 (AR 0000004774-0000004776). According to the Conceptual Feasibility Report, the scientific processes involved in processing the magnesium ore does not emit any of the other CAA criteria air pollutants, and thus a detailed discussion of the mill’s effects as to those pollutants is not necessary. See Conceptual Feasibility Report at 62-64 (AR 0000004774-0000004776).

To the extent that the Plaintiffs argue that the BLM’s “hard look” requires the agency to discuss and analyze the impacts from all the CAA criteria air pollutants, the Court disagrees with this contention. In support of this proposition, the Plaintiffs cite and discuss Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1046, which they assert “requires” the BLM to analyze and discuss all CAA criteria air pollutants, Plaintiffs’ Reply at 9. In that case, the BLM evaluated

the air quality impacts from oil-and-gas drilling by: (i) assessing the pre-drilling air quality standards for the proposed drilling area under the NAAQS, the NMAAQs, and the AQI; and then (ii) adding the predicted pollutant impacts that would occur if “all 370 [proposed] wells would be drilled at the same time.” 59 F.4th at 1046. After performing this evaluation, the BLM concluded that, even with the increases in pollutants that would occur in this scenario, the relevant pollutant levels “would not exceed the NAAQS or the NMAAQs or increase the number of days categorized as ‘unhealthy’ pursuant to the AQI.” 59 F.4th at 1046 (source of quoted material not cited). The BLM also “conducted the same analysis regarding the cumulative impacts of all 3,200 wells anticipated in the region,” and concluded that “these increases would also not exceed the NAAQS or NMAAQs or increase the number of days categorized as ‘unhealthy.’” 59 F.4th at 1046 (source of quoted material not cited). The Tenth Circuit concluded that this emissions-comparison technique constituted a sufficiently hard look under the NEPA and stated that “[c]omparison to standards set by administrative bodies to determine whether healthy levels of pollutants would be exceeded constitutes a hard look at the health impacts of the drilling.” 59 F.4th at 1046.

The Tenth Circuit did not rule, however, that analysis of all CAA criteria air pollutants that could arise from any environmental impact in any case is necessary to constitute a “hard look” at air quality pollutants. Moreover, the EA in this case notes that the Mining Project’s environmental impacts of “would not result in NAAQS exceedances,” but nevertheless undertook a detailed analysis of the NAAQS pollutant of greatest concern given baseline levels: particulate matter. EA at 9 (AR 0000000025). Moreover, given the predicted greenhouse gas waste products resulting from the mill, the EA also discusses CO₂ and SF₆. See Conceptual Feasibility Report at 62-64 (AR 0000004774-0000004776). In sum, the Court concludes that, with respect to the EA’s analysis and discussion of the Processing Mill’s air quality impacts, the BLM took a “hard look”

at the mill's air quality effects, and its method "'had a rational basis and took into consideration the relevant factors.'" Silverton Snowmobile Club v. U.S. Forest Serv., 433 F.3d at 782 (quoting Comm. to Pres. Boomer Lake Park v. Dep't of Transp., 4 F.3d 1543, 1553 (10th Cir. 1993)).

2. The BLM's Analysis of the Processing Mill's Impacts on Water Quantity is Sufficient Under the NEPA, but its Analysis of the Processing Mill's Impacts on Water Quality is Inadequate Under the NEPA.

As noted above, part of the Plaintiffs' "hard look" contentions is that, in preparing the EA, the FONSI, and approving the project, the BLM did not adequately consider the "details of the milling and its impacts, including . . . the . . . water pollution from the mill, of the waste dumping and byproducts from the milling, of the sources of water needed for the mill (and impacts from water withdrawals in the area)." Plaintiffs' Brief at 29.⁵¹ In their Reply Brief, the Plaintiffs follow up on this argument, stating that, "outside of a general estimate that the mill would use 17 million

⁵¹In their Brief and Reply, the Plaintiffs quote various internal communications between BLM employees, and the Plaintiffs rely on these communications to support their various legal arguments in this case. See, e.g., Plaintiffs' Brief at 28 (citing Letter from David Tognoni to Bill Childress, Re: American Magnesium Application for Plan of Operations Approval; NMNM 136678; 3809 (L0310); American Magnesium's Response to the Bureau of Land Management's Letter Dated December 8, 2017 at 6 (dated March 1, 2018)(AR 0000004598)); Plaintiffs' Brief at 28 (quoting Email from Kenneth Gardner, cc'd Anthony Bates, Leighandra Neeven, Ida Viarreal, William Auby, Re: Foothills Dolomite quarry (magnesium project); status (dated June 27, 2017), filed February 21, 2023 (Doc. 47-7)); Plaintiffs' Brief at 29 (citing Email from Kenneth Gardner to Leighandra Neeven and William Auby, cc'd Adam Merrill, Re: Foothills Dolomite quarry (magnesium project); status (dated June 28, 2017), filed February 21, 2023 (Doc. 47-8)). The Tenth Circuit has stated: "[A] diversity of opinion by local or lower-level agency representatives will not preclude the agency from reaching a contrary decision, so long as the decision is not arbitrary and capricious and is otherwise supported by the record." WildEarth Guardians v. Nat'l Park Serv., 703 F.3d 1178, 1186-87 (10th Cir. 2013). The Court applies this rule in this case, and, to the extent that the internal emails cited by the Plaintiffs do not accord with the agency's ultimate decision, "the only 'inconsistency' [that the Plaintiffs] can point to is the fact that the agencies changed their minds -- something that, as long as the proper procedures were followed, they were fully entitled to do." Nat'l Ass'n of Home Builders v. Defs. of Wildlife, 551 U.S. 644, 658-59 (2007)(source of quoted material not cited).

gallons each year, BLM's EA provides no further information on water quantity impacts, and no information on water quality impacts.” Plaintiffs’ Reply at 10. Also in their Reply, the Plaintiffs state that the Conceptual Feasibility Report indicates that “the waste from the Processing Mill poses a significant threat to water **quality**,” largely because of the pollutant qualities of two wastes: “‘Magnesium Process Residue’ and ‘Magnesium Sludge.’” Plaintiffs’ Reply at 10 (emphasis in Plaintiffs’ Reply)(quoting Conceptual Feasibility Report at 62-63 (AR 0000004774-0000004775). The Plaintiffs state: “Neither the 2013 Study, nor anything in the record, contains any plan for containing these wastes, outside of a vague mention that they should be ‘contained’ and ‘restricted.’” Plaintiffs’ Reply at 10 (quoting Conceptual Feasibility Report at 64 (AR 0000004776). On these grounds, the Plaintiffs contend that the BLM failed in its NEPA-imposed obligation to take a “hard look” at the Processing Mill’s environmental impacts as they relate to water quantity and water quality. Plaintiffs’ Brief at 20, 29-33. The Federal Defendants offer many counter arguments to these contentions, which the Court analyzes in detail below. Their arguments’ basic thrust, however, is that the BLM did adequately discuss these environmental impacts, both in the EA itself and in the Conceptual Feasibility Report, which the Federal Defendants assert is “incorporated . . . by reference” into the EA. Federal Defendants’ Brief at 18 n.5.

The Court concludes that the BLM adequately considered the Processing Mill’s impacts to water quantity, but it did not adequately consider the Processing Mill’s impacts to water quality. The Court explains these conclusions in turn, first considering the water quantity-related arguments, before turning to the more complex issue: the BLM’s consideration of the Processing Mill’s environmental effects on water quality. For both of these discussions, the Court is mindful of the relevant regulatory standards for the adequacy of an EA: that an EA is a “concise public

document” which must “[b]riefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.” 40 C.F.R. § 1508.9(a), (a)(1) (2019). The EA “[s]hall include brief discussions of . . . the environmental impacts of the proposed action,” 40 C.F.R. § 1508.9(b) (2019), and those impacts include “[i]ndirect” impacts, “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable,” 40 C.F.R. § 1508.8(b) (2019). An agencies analysis of environmental impacts “shall include discussion of . . . [i]ndirect effects and their significance,” as well as “[m]eans to mitigate adverse environmental impacts.” 40 C.F.R. § 1502.16(b), (h) (2019). See Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1034 (applying 40 C.F.R. § 1502.16’s standards to “hard look” review of an EA). With these requirements in mind, the Court proceeds with its analysis of BLM’s discussion of the water-related impacts of the Processing Mill.

a. The EA’s Discussion of the Processing Mill’s Impacts to Water Quantity is Sufficient Under the NEPA.

As noted, in its “general information regarding processing,” EA at 22 (AR 0000000038), the EA estimates that the Processing Mill’s heating and molding process will require 17,000,000 gallons of water per year, see EA at 22 (AR 0000000038). The EA also contains discussion of water usage related to dust suppression on the proposed route on which ore would be transported from the Mining Project site to the proposed mill, and water that would be needed at the Mining Project site. See EA at 45 (AR 0000000061); id. at 10 (AR 0000000026). On this point, the EA estimates that “daily water use for dust suppression along all roads including the access road, unnamed BLM road and County Road B016 is expected to require 28,000 gallons per day,” EA at 45 (AR 0000000061), while 5,000 gallons of daily water will be needed at the Mining Project site

“for dust suppression, site reclamation activities, resource verification and mining activities,” EA at 11 (AR 0000000027). See EA at 9-10 (AR 0000000025-0000000026)(concluding that the total of 33,000 daily gallons of water used at the Mining Project site and for dust suppression along the access road would be “approximately 1% of the total daily water use for households in Luna County”). The annual water required for the Mining Project site and dust suppression is roughly half of the amount needed for the Processing Mill’s heating and molding process,⁵² and thus the Processing Mill’s water usage would be approximately two percent of the daily water use for households in Luna County. See EA at 9-10 (AR 0000000025-0000000026). The EA states that the water used at the Mining Project site and for dust suppression along the access road “is expected to be sourced from a permittable source under the authority of the [New Mexico Office of the State Engineer],” and that “[n]o water well would be drilled.” EA at 45 (AR 0000000061). The EA explains that the source from which the Mining-Project-site and dust-suppression water will be procured “may include a single permittable source or multiple permittable sources.” EA at 45 (AR 0000000061).

The Court concludes that this “brief discussion[.]” of the water quantity-related impacts of the Processing Mill is sufficient for the purposes of an EA. 40 C.F.R. § 1508.9(b) (2019). The EA provides the amount of water used annually by the Processing Mill, as well as a means of conducting a basic quantitative-comparative analysis with the “total daily water use for households

⁵²The Court reaches this conclusion by multiplying the 33,000 daily gallons of water by 260, which is 5 times 52. See EA at 32 (AR 0000000048)(predicting that transportation of ore to the Processing Mill will take place “5 days per week, 52 weeks per year”). 33,000 gallons times 260 days is 8,580,000 annual gallons of water to be used for dust suppression on the access road. This amount is 50.47% of the 17,000,000 annual gallons of water to be used in the smelting process. See EA at 22 (AR 0000000038).

in Luna County.” EA at 10 (AR 0000000026). The EA also states water related impacts will be mitigated by the fact that that no water well will be drilled and will be sourced from a permissible source. See EA at 45 (AR 0000000061); id. at 21 (AR 0000000037). To support the adequacy of this discussion, the Federal Defendants rely on the Tenth Circuit’s analysis in Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1044, which the Federal Defendants assert stands for the proposition that the “BLM took hard look at water impacts from oil and gas wells where it considered how much water was likely to be used and compared that water consumption to the total amount of water projected to be used in the region.” Federal Defendants’ Brief at 17.

The Court agrees that Diné Citizens Against Ruining Our Env’t v. Haaland provides support for the notion that an EA water quantity discussion may rely primarily on a quantitative-comparative analysis. See 59 F.4th at 1044. In Diné Citizens Against Ruining Our Env’t v. Haaland, the Tenth Circuit evaluated the BLM’s EAs and an EA Addendum which analyzed the environmental impacts for 370 permits to drill for oil and gas in the San Juan Basin’s Mancos Shale. See 59 F.4th at 1024. Environmental groups alleged, among other things, that the BLM had failed to take the requisite “hard look” at the environmental impacts of the proposed drilling on water resources. 59 F.4th at 1024. The question of water resource impacts related to the Mancos Shale oil-and-gas drilling proposals has a history that predates the 2023 Diné Citizens Against Ruining Our Env’t v. Haaland case. In an earlier, “separate but related case,” 59 F.4th at 1024, see Diné Citizens Against Ruining Our Env’t v. Bernhardt, 923 F.3d 831, 835 (10th Cir. 2019), the Tenth Circuit reversed the Court in part, with instructions to vacate the FONSI and remand five EAs to the BLM because of insufficient discussion of cumulative water resource impacts of 3,960 reasonably foreseeable wells in the Mancos Shale area, Diné Citizens Against Ruining Our Env’t v. Bernhardt, 923 F.3d at 856-59, reversing in part Diné Citizens Against

Ruining Our Env't v. Jewell, 312 F. Supp. 3d 1031, 1090 (D.N.M. 2018)(Browning, J). Following remand, in preparing the EA Addendum the BLM sought to solve these deficiencies, but -- in Diné Citizens Against Ruining Our Env't v. Haaland -- the environmental groups argued that the BLM's revamped analysis "continues to be deficient." Diné Citizens Against Ruining Our Env't v. Haaland, 59 F.4th at 1044. Specifically, the environmental groups argued that, "while BLM quantified the cumulative amount of water the wells would use, it did not say anything about the impact the water consumption would have on the environment or specific groundwater sources," especially "in the context of the ongoing drought in New Mexico and the anticipated decrease in water from climate change." 59 F.4th at 1044. The environmental groups also contended that the BLM "should consider how the water use may impact the Navajo Nation where 40% of households currently lack water." 59 F.4th at 1044.

The Tenth Circuit concludes that the BLM "took a sufficiently hard look at the [drilling applications'] expected impact on the water resources in the region." 59 F.4th at 1045. The BLM's hard look "relied primarily on a quantitative-comparative analysis," 59 F.4th at 1045, in which it compared the estimated water consumption of all the wells -- assuming "all the wells employed the most water-intensive methods" -- with the "total amount of water projected to be used in the region, concluding the water for the [proposed wells] would represent a small amount of the total water use in the San Juan Basin (0.12% to 1.3%)." 59 F.4th at 1044.⁵³ The EA Addendum also

⁵³The Tenth Circuit notes that, while this quantitative-comparative analysis is not always appropriate when used to assess greenhouse gas emissions, in the water resources context this method is more apposite:

With GHGs, unlike groundwater resources, BLM is not limited to a finite amount of emissions. And because of the global nature of climate change, BLM can compare GHG emissions on any large scale that shows the emissions from the

incorporated the “2019 BLM New Mexico Water Support Document, which analyzed the state of the groundwater wells and their existing supply of water,” and “noted some mitigating factors, including that the oil and gas wells could use non-potable groundwater, recycled flowback water, and produced water, which is water that cannot be applied to other potential uses.” Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1044. As for the idea that the BLM’s analysis does not consider the effect that drought conditions and climate change would have on the available water resources, the “BLM stated it considered the available water resources in the affected area, so the analysis is ‘already in the drought context . . . if indeed the counties are in a state of drought.’” Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1044 (quoting administrative record). BLM also states that it “is in the process of developing a model to simulate water availability based on various scenarios.” Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1045. Last, the Tenth Circuit concludes that the environmental groups’ contention that “the water usage related to the [proposed drilling] will exacerbate any water insecurity in the region is not supported by the record.” 59 F.4th at 1045. Accordingly, the Tenth Circuit concludes that “the decision not to consider further the impact on human water availability was not arbitrary or capricious.” 59 F.4th at 1045.

APDs are small without determining the effect those emissions will have on the local environment. With water, however, there is a finite amount of water supporting the various water uses in a specific region. BLM calculated that the APD activities would account for 0.12% to 1.3% of the total water usage in the region, depending on the methods used for drilling for and extracting oil and gas. This accounts for a small amount of the total water resources available in the region, which is a much more useful comparison than GHG emissions compared to national or world quantities.

Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1045.

Here, the BLM likewise provides a basic quantitative-comparative analysis of the estimated water usage of the Mining Project with the “total daily water use for households in Luna County.” EA at 10 (AR 0000000026). As in Diné Citizens Against Ruining Our Env’t v. Haaland, this data provides a “useful comparison” which indicates that the Mining Project’s total water usage “accounts for a small amount” when compared with the daily household water usage in Luna County. 59 F.4th at 1045. Moreover, the BLM also provides a brief discussion of the water’s likely source. See EA at 45 (AR 0000000061); id. at 21 (AR 0000000037). Given the NEPA’s “twin aims” of reasoned agency decision-making and the public’s opportunity to participate in that decision-making, Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc., 462 U.S. at 97, and the BLM’s regulatory obligation to provide a “brief discussion[]” of the water quantity-related impacts of the Processing Mill is sufficient for the purposes of an EA, 40 C.F.R. § 1508.9(b) (2019), the Court concludes that the BLM’s discussion of water quantity impacts in the EA is sufficient under the NEPA.

b. The BLM’s Analysis of the Processing Mill’s Impacts on Water Quality is Inadequate Under the NEPA.

The Plaintiffs argue that the BLM did not take a “hard look” at “details of the milling and its impacts, including . . . the . . . water pollution from the mill, [and] of the waste dumping and byproducts from the milling.” Plaintiffs’ Brief at 29. See Plaintiffs’ Reply at 10 (“BLM’s EA provides no . . . information on water quality impacts.”). More specifically, the Plaintiffs state that the Conceptual Feasibility Report indicates that “the waste from the Processing Mill poses a significant threat to water **quality**,” largely because of the pollutant qualities of two wastes: “‘Magnesium Process Residue’ and ‘Magnesium Sludge.’” Plaintiffs’ Reply at 10 (emphasis in Plaintiffs’ Reply)(quoting Conceptual Feasibility Report at 62-63 (AR 0000004774-0000004775)).

The Plaintiffs state that “[n]either the 2013 Study, nor anything in the record, contains any plan for containing these wastes, outside of a vague mention that they should be ‘contained’ and ‘restricted.’” Plaintiffs’ Reply at 10 (quoting Conceptual Feasibility Report at 64 (AR 0000004776)).

The Court agrees with the Plaintiffs that the BLM has not discussed adequately the “reasonably foreseeable” impacts to water quality that arise from magnesium sludge, one of the Processing Mill’s pollutants. 40 C.F.R. § 1508.8(b) (2019). The Court explains this conclusion as follows. First, the Court describes the extent to which the EA and the Conceptual Feasibility Report discuss the Processing Mill’s impacts to water quality. Next, the Court compares this discussion to the relevant NEPA regulatory guidance and case law, and concludes that the BLM has not taken the NEPA-mandated “hard look” at the water quality impacts. Wyoming v. U.S. Dep’t of Agric., 661 F.3d 1209, 1263 (10th Cir. 2011). Last, the Court analyzes -- but ultimately disagrees with -- the Federal Defendants’ and American Magnesium’s arguments regarding the adequacy of the BLM’s discussion of the Processing Mill’s water quality impacts.

As the Court notes above, the Plaintiffs’ concerns regarding Magnesium Process Residue and Magnesium Sludge arise from information contained in the Conceptual Feasibility Report. The Conceptual Feasibility Report is not a document that the BLM, or any entity of the United States government, authored. Rather, it was prepared in 2013 by a third-party engineering consultancy group at American Magnesium’s behest. See Conceptual Feasibility Report at cover page-i (AR 0000004702-0000004704). Nevertheless, the Federal Defendants assert that the EA incorporates by reference the Conceptual Feasibility Report, and the Plaintiffs do not contest this assertion. See Federal Defendants’ Brief at 18 n.5; 40 C.F.R. § 1502.21 (2019); 40 C.F.R. § 1500.4(j) (2019)(“Agencies shall reduce excessive paperwork by . . . [i]ncorporating by

reference.”); Rocky Mountain Wild v. Dallas, 98 F.4th 1263, 1294 (10th Cir. 2024)(noting that, in NEPA analysis, “[w]e may also consider non-NEPA documents that have been incorporated by reference into the NEPA documents”).

The Conceptual Feasibility Report’s final four pages contain a discussion of the conceptual Processing Mill’s “environmental issues.” Conceptual Feasibility Report at 61 (AR 0000004773). Among these issues is a discussion of various “process emissions or wastes” from the Processing Mill, of which there are estimations that the mill will emit -- annually -- 180,000 tons of “Magnesium Process Residue” and 2,300 tons of “Magnesium Sludge.” Conceptual Feasibility Report at 62 (AR 0000004774). The Conceptual Feasibility Report describes these pollutants as:

Magnesium Process Residue ($\text{Ca}_2\text{SiO}_4 + \text{FeSi} + \text{MgO} \cdot \text{CaO} + \text{CaF}_2 + \text{Mg} + \text{Mg}_3\text{N}_2$)

Magnesium residue is a residual product of reaction in the Pidgeon process. It is gray-white in color and is not flammable or combustible. Due to the presence or residual dolomitic lime, magnesium nitride and magnesium metal exposure to acids or water will result in the liberation of heat, hydrogen and ammonia. Material will have a detrimental effect on surface and underground aquifers increasing pH and ammonia levels. The FeSi and CaF_2 components are generally considered inert to the environment and pose no health or environmental problems.

Magnesium Sludge

($\text{MgCl}_2 + \text{KCl} + \text{MgO} + \text{NaCl} + \text{CaCl} + \text{Mg}_3\text{N}_2 + \text{Mg} + \text{Be} + \text{Al} + \text{Zn} + \text{Mn}$) - Raw magnesium crowns are refined by using a mixture of salts called refining flux. The major constituents of the flux consist of magnesium chloride, potassium chloride and fluorspar. The resulting sludge consists of a variety of elements outlined above depending whether the process is producing alloy or pure metal. Sludge is very hygroscopic and will react with water or acids to release heat, hydrogen and ammonia. Material will have a detrimental effect on surface water and underground aquifers increasing chloride, nitride and possibly toxic beryllium levels. Air contamination consisting of water, hydrogen and ammonia is minimal due to low release rates and quick dispersal.

Conceptual Feasibility Report at 63 (AR 0000004775). After describing the quality and characteristics of these “process outputs,” the Conceptual Feasibility Report offers “proposed methods of control, disposal, and storage” for both wastes, stating:

Magnesium Process Residue This is major process waste. Storage should be in a location, which will have minimal impact on surface and underground aquifers. Since the major constituent of this waste is Ca_2SiO_4 , local cement companies can add up to 10% by weight to clinker production.

Magnesium Sludge Storage of this waste must be restricted from impacting surface or underground aquifers. No secondary use is known at this time.

Conceptual Feasibility Report at 64 (AR 0000004776). The EA does not mention or discuss either of these wastes using the names “Magnesium Process Residue” or “Magnesium Sludge.” Conceptual Feasibility Report at 64 (AR 0000004776). During its discussion of the Processing Mill, however, the EA states that one “[m]ajor byproduct[] of the proposed milling process” is “calcium silicate (Ca_2SiO_4)” and that American Magnesium would “sell the Ca_2SiO_4 byproduct to local cement companies.” EA at 22 (AR 0000000038).

The Court concludes that the EA’s discussion of “the Ca_2SiO_4 byproduct” is sufficient analysis of the magnesium process residue. EA at 22 (AR 0000000038). Although the EA does not identify or evaluate a material called “Magnesium Process Residue,” Conceptual Feasibility Report at 64 (AR 0000004776), the EA’s “brief discussion[],” 40 C.F.R. § 1508.9(b) (2019), about selling material to local cement companies comports with the Conceptual Feasibility Report’s recommendation that “the major constituent of [magnesium process residue] is Ca_2SiO_4 , [and] local cement companies can add up to 10% by weight to clinker production,” Conceptual Feasibility Report at 64 (AR 0000004776). This discussion indicates that the BLM evaluated this indirect impact and subsequently provides a means by which the waste will be disposed. See Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1034. This discussion, the Court

concludes, is a sufficient “hard look” for NEPA purposes. See Robertson v. Methow Valley Citizens Council, 490 U.S. at 350.

The Court does not reach the same conclusion, however, for the magnesium sludge. As it relates to this pollutant, the Conceptual Feasibility Report states that this material “will have a detrimental effect on surface water and underground aquifers increasing chloride, nitride and possibly toxic beryllium levels.” Conceptual Feasibility Report at 63 (AR 0000004775). Moreover, unlike the Conceptual Feasibility Report’s information on other process wastes, the Conceptual Feasibility Report has no proposal for storage, control, or disposal of the magnesium sludge, stating only that “[s]torage of this waste must be restricted from impacting surface or underground aquifers,” and “[n]o secondary use is known at this time.” Conceptual Feasibility Report at 64 (AR 0000004776). The EA does not mention this “toxic” and “detrimental” waste, which is produced in an amount of approximately 2,300 tons per year. Conceptual Feasibility Report at 62-63 (AR 0000004774-0000004775).

The limited statements in the Conceptual Feasibility Report regarding magnesium sludge do not fulfill the BLM’s NEPA-imposed obligation to provide a “brief discussion[],” 40 C.F.R. § 1508.9(b) (2019), of the Processing Mill’s “reasonably foreseeable” impacts, 40 C.F.R. § 1508.8(b) (2019). Although “the parameters of the ‘hard look’ standard have not been defined with granular precision, the aim of the requirement is clear: an agency must identify and evaluate ‘the adverse environmental effects of the proposed action.’” Ctr. for Biological Diversity v. U.S. Dep’t of the Interior, 72 F.4th at 1191 (Rossman, J., concurring in part and dissenting in part)(quoting Robertson v. Methow Valley Citizens Council, 490 U.S. at 350). Here, the magnesium sludge’s “detrimental effect on surface water and underground aquifers,” including “increasing chloride, nitride and possibly toxic beryllium levels,” Conceptual Feasibility Report

at 63 (AR 0000004775), are “reasonably foreseeable” “ecological effects” that arise from the Processing Mill, 40 C.F.R. § 1508.8(b) (2019). Indeed, the Conceptual Feasibility Report identifies an ecological issue that will arise from the Processing Mill’s smelting process -- a “toxic” and “detrimental” waste weighing in the thousands of tons annually -- but beyond this description, neither the Conceptual Feasibility Report nor the EA provide any discussion of how the waste will be stored or controlled. Conceptual Feasibility Report at 63 (AR 0000004775). The BLM made no effort in the EA to quantify this impact in any way, nor does it conclude that the sludge’s impacts will be “minimal,” or otherwise explain the non-discussion regarding the sludge. New Mexico ex rel. Richardson v. Bureau of Land Mgmt., 565 F.3d at 713. In the language of the regulations, neither the EA nor the Conceptual Feasibility Report provide any evaluation of the “significance” of the magnesium sludge impact, 40 C.F.R. § 1502.16(b) (2019), or give any discussion of “[m]eans to mitigate adverse environmental impacts,” 40 C.F.R. § 1502.16(h) (2019). See Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1034 (applying 40 C.F.R. § 1502.16’s standards to “hard look” review of an EA). In short, the BLM did not take a “hard look” at the Processing Mill’s environmental impacts on water quality for NEPA purposes, see Utah Shared Access All. v. U.S. Forest Serv., 288 F.3d at 1207, and there is no basis on which the Court can determine that the BLM made a “reasoned evaluation” of the magnesium sludge’s ecological effects that would support the issuance of the FONSI in this case, Marsh v. Oregon Nat. Res. Council, 490 U.S. at 378.

Moreover, although the BLM may have considered these indirect ecological effects and decided that it did not require an in-depth analysis, the Court has no way of knowing whether this is what occurred, and -- when conducting its APA review -- the Court “should not attempt itself to make up for [an agency’s] deficiencies.” Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm

Mut. Auto. Ins. Co., 463 U.S. at 43. Indeed, even under the deferential standard that governs the Court’s review and the presumption of agency validity, see Citizens’ Comm. to Save Our Canyons v. Krueger, 513 F.3d 1169, 1176, when an agency does “not provide any reasoning or analysis for its conclusion,” then, “there is nothing for the court to defer to,” WildEarth Guardians v. United States Bureau of Land Mgmt., 870 F.3d 1222, 1238 (10th Cir. 2017). Here, the BLM has not “articulated a rational connection between the facts found and the choice made,” Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc., 462 U.S. at 105, because neither the Conceptual Feasibility Report nor the EA explains how this “toxic” and “detrimental” waste will be managed, or why the Mining Project should be approved despite this waste. Conceptual Feasibility Report at 62-64 (AR 0000004774-0000004776). Contra Hillsdale Env’t Loss Prevention, Inc. v. U.S. Army Corps of Engineers, 702 F.3d 1156, 1179-81 (10th Cir. 2012). The BLM’s failure to take a “hard look” at the reasonably foreseeable environmental impacts related to the Processing Mill’s waste products violates the NEPA’s “twin aims” of reasoned agency decision-making and the public’s opportunity to participate in that decision-making. Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc., 462 U.S. at 97. See Utah Shared Access All. v. U.S. Forest Serv., 288 F.3d at 1207 (noting that the “NEPA places upon federal agencies the obligation ‘to consider every significant aspect of the environmental impact of a proposed action,’” and “[i]t also ensures that an agency will inform the public that it has considered environmental concerns in its decision-making process” (quoting Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc., 462 U.S. at 97)). In sum, the BLM acted arbitrarily and capriciously in failing to take a hard look at the water quality impacts related to the Mining Project’s Processing Mill.

At the hearing, American Magnesium tacitly acknowledged that the magnesium sludge issue is potentially problematic in terms of the BLM’s NEPA compliance. See Tr. at 92:11-13

(Domenici)(“I don’t think a remand is necessary. But if [it] was, it would be for an extremely narrow issue related to the magnesium sludge.”). Nevertheless, the Federal Defendants and American Magnesium marshal three main arguments in support of the BLM’s analytical treatment of the magnesium sludge. The Court considers each argument in turn, ultimately concluding that none of these arguments persuades the Court that the BLM fulfilled its NEPA-imposed obligations in its discussion and analysis of the Processing Mill’s magnesium sludge pollutant.

First, the Federal Defendants craft a broad methodological critique of the Plaintiffs’ argument: they contend that the Plaintiffs’ contentions are an attempt to impose the “more stringent” requirements for an EIS on the EA at issue in this case. Federal Defendants’ Brief at 23. In analyzing the Plaintiffs’ argument related to magnesium sludge, however, the Court carefully has applied the applicable regulatory standards for environmental assessments. See 40 C.F.R. § 1508.9 (2019); 40 C.F.R. § 1508.8(b) (2019). As the Court notes, an EA -- per these regulatory standards -- is a “concise public document,” 40 C.F.R. § 1508.9(a) (2019), which “[s]hall include brief discussions of . . . the environmental impacts of the proposed action,” 40 C.F.R. § 1508.9(b) (2019). As the Tenth Circuit has instructed, even for an EA, the NEPA’s “hard look” requirement obliges agencies to consider the proposed action’s environmental consequences, which include discussion of the proposed action’s “[i]ndirect effects and their significance,” as well as discussion of the “[m]eans to mitigate adverse environmental impacts.” 40 C.F.R. § 1502.16(b), (h) (2019). See Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1034 (applying 40 C.F.R. § 1502.16’s standards to “hard look” review of an EA). While an EA need not contain as much detail about environmental impacts as an EIS, see Comm. to Pres. Boomer Lake Park v. Dep’t of Transp., 4 F.3d 1543, 1554 n.9 (10th Cir. 1993)(“An EA is essentially a more concise and less detailed version of an EIS.”), this allowance for “less detail[]”

or a “rough-cut” approach, WildEarth Guardians v. U.S. Fish & Wildlife Serv., 784 F.3d 677, 690 (10th Cir. 2015)(quoting Spiller v. White, 352 F.3d 235, 237 (5th Cir. 2003)), is not a license for the agency to ignore substantive requirements, but rather to perform a more “brief[]” and “concise” analysis of those substantive requirements, 40 C.F.R. § 1508.9 (2019). See W. Watersheds Project v. Bureau of Land Mgmt., 721 F.3d 1264, 1274 (10th Cir. 2013)(stating that, although the regulations require similar analyses in an EIS and an EA, “the *depth* of discussion and analysis required is different depending on whether the document is an EIS or an EA” (emphasis in W. Watersheds Project v. Bureau of Land Mgmt.)). In nearly all respects, the EA in this case complies with these requirements, providing “brief discussions,” 40 C.F.R. § 1508.9(b) (2019), of the Processing Mill’s reasonably foreseeable environmental impacts to air quality, see Analysis Section II.B.1, supra, at 165-72, water quantity, see Analysis Section II.B.2.a, supra, at 174-79, and impacts related to the ore’s transportation from the Mining Project site to the Processing Mill, see Analysis Section II.B.3, infra, at 190-93. The BLM’s non-evaluation of the Processing Mill’s reasonably foreseeable impacts to water quality, however, falls short of the mark under the NEPA, even applying the “rough-cut” approach used for EAs. WildEarth Guardians v. U.S. Fish & Wildlife Serv., 784 F.3d at 690.

Second, the Federal Defendants again rely on Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1044, for the general proposition that their discussion and analysis of impacts to water resources is “sufficient for the purposes of an EA under NEPA.” Federal Defendants’ Brief at 17. The Federal Defendants state that, in Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1044, the Tenth Circuit found that the “BLM took hard look at water impacts from oil and gas wells where [sic] it considered how much water was likely to be used and compared that water consumption to the total amount of water projected to be used in the region.”

Federal Defendants' Brief at 17. As the Court discusses above, the Court agrees with the Federal Defendants that Diné Citizens Against Ruining Our Env't v. Haaland provides support for the notion that an EA water quantity discussion may rely primarily on a quantitative-comparative analysis. See 59 F.4th at 1044; Analysis Section II.B.2.a, supra, at 174-79.

This conclusion, however, does not render the BLM's water quality impacts analysis conclusively adequate. Importantly, the "hard look" analysis at issue in Diné Citizens Against Ruining Our Env't v. Haaland concerns only water quantity and not water quality. In that case, after concluding that the BLM's quantitative-comparative discussion and analysis is sufficient for the NEPA's purposes, the Tenth Circuit concludes that the "BLM did not arbitrarily or capriciously conclude that the APD-related water use would not significantly impact the environment." 59 F.4th at 1045. Indeed, in Diné Citizens Against Ruining Our Env't v. Haaland, the environmentalist group's arguments regarding the analytical insufficiencies of the EAs and the EA Addendum relate only to concerns about water quantity in the face of drought, climate change, and water insecurity in the Navajo Nation. See 59 F.4th at 1044-45. The Tenth Circuit's analytical focus, then, is limited to these arguments, all of which relate to "water use" and not concerns related to water quality. 59 F.4th at 1045. Because Diné Citizens Against Ruining Our Env't v. Haaland does not consider a challenge to an agency's analysis and discussion of water quality impacts, the case is not instructive on what constitutes an adequate "hard look" NEPA analysis related to water quality impacts. See Sloan v. State Farm Mut. Auto. Ins. Co., 360 F.3d 1220, 1231 (10th Cir. 2004)("[C]ases are not authority for propositions not considered." (quoting Sangre de Cristo Dev. Corp. v. City of Santa Fe, 1972-NMSC-076, ¶ 23, 84 N.M. 343, 348, 503 P.2d 323, 328)). In sum, while the Tenth Circuit's analysis in Diné Citizens Against Ruining Our Env't v. Haaland is instructive in many respects, the case does not explain adequately the BLM's

lack of discussion or analysis regarding the Processing Mill’s “process emissions or wastes.” Conceptual Feasibility Report at 62 (AR 0000004774).

Last, the final argument that the Federal Defendants and American Magnesium make in support of the BLM’s analytical treatment of the magnesium sludge is that any concerns regarding the environmental risks of this pollutant are tempered:

[A]s explained in the EA, the processing would have to be permitted by the relevant authorities and would have to comply with all relevant hazardous waste disposal laws. Therefore, it’s not reasonably foreseeable. And this is going to be at an industrial park. American Magnesium isn’t going to be able to take their hazardous waste and dump it in a nearby river. It’s going to be controlled by the relevant hazardous waste disposal laws.

Tr. at 17:20-18:4 (Boylan). See 40 C.F.R. § 1508.8(b) (2019) (“Indirect effects . . . are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.”). Similarly, American Magnesium states that the “magnesium sludge” will be “highly regulated,” and that “you would have to have a contract and a lease with the landlord,” and also “we expect, at least three to four other very important state permits.” Tr. at 17:20-18:4 (Boylan). According to American Magnesium, “[t]he idea that magnesium sludge would be unmanaged is not a realistic expectation,” and American Magnesium does not “think that [it] is appropriate . . . to say[,] . . . in a modern world with enormous state and local regulation, [that] this sludge that you’ve identified is going to be unregulated,” because such a contention “simply doesn’t take into account the realities of setting up a processing mill.” Tr. at 34:24-35:6 (Domenici).

Distilled to its essence, this argument contends that any potential impacts to surface water or underground aquifers resulting from the Processing Mill’s magnesium sludge waste are not “reasonably foreseeable” and thus not subject to discussion in the EA, because these pollutants

will be subject to various State-level permits that adequately ensure that the sludge will not detrimentally impact the environment. 40 C.F.R. § 1508.8(b) (2019). Relatedly, the Federal Defendants state in their Brief: “The reasonableness of BLM’s decision to approve the [Mining Project] before plans for the processing mill were finalized is bolstered by the fact that agencies with permitting authority will conduct further analysis before the mill is constructed.” Federal Defendants’ Brief at 20. In support, the Federal Defendants cite to sections of the EA which state:

While the BLM does not have jurisdiction over the approval or permitting of a mill site off of BLM lands, the [New Mexico Mineral and Mining Division] together with the City [of Deming] and [Luna] County, would have such jurisdiction. Prior to fully defining any potential mill site or activity, the BLM assumes that American Magnesium would work with MMD and other local agencies to permit any processing facility locally.

EA at 22 (AR 0000000038). See Federal Defendants’ Brief at 20 (citing EA at 22 (AR 0000000038)). In short, these arguments’ central contention is that the State-level permitting requirements and waste-disposal laws will ensure that the magnesium sludge will not pose any environmental risk to surface water and groundwater, and thus the BLM need not discuss magnesium sludge at all in its NEPA analysis -- either because “it’s not reasonably foreseeable,” Tr. at 17:24 (Boylan), or because those permitting requirements will sufficiently deal with the sludge, see Tr. at 34:24-35:6 (Domenici).

The Plaintiffs respond that “the fact that AM is required [to] obtain the needed . . . water pollution permits and other approvals from state and local agencies does not excuse BLM from analyzing the direct, indirect, and cumulative impacts from the mill.” Plaintiffs’ Brief at 32. The Plaintiffs state that the Federal Defendants’ permitting-will-address-the-environmental-issues argument “evinces a misunderstanding of the nature of NEPA and its relationship to substantive environmental laws such as the Clean Air Act.” Plaintiffs’ Brief at 32 (quoting Great Basin Res.

Watch v. Bureau of Land Mgmt., 844 F.3d 1095, 1103 (9th Cir. 2016)(Graber, J.)). The Plaintiffs argue;

Although various other permits would regulate the substantive environmental impacts on private lands (e.g., water and air pollution from the mill), BLM has a separate duty under NEPA to fully analyze these impacts and cannot defer to some future review by another agency, especially when NEPA does not apply to that agency (the case with state agencies).

Plaintiffs' Brief at 32.

To the extent that the Federal Defendants argue that the water quality impacts that will arise from the Processing Mill are not “reasonably foreseeable,” because the State will address these impacts through a permitting process, the Court does not agree with this conclusion. 40 C.F.R. § 1508.8(b) (2019). Despite making this assertion at the hearing in this matter, see Tr. at 17:24 (Boylan), the Federal Defendants cite no cases that support the notion that the existence of State permitting renders impacts not “reasonably foreseeable,” 40 C.F.R. § 1508.8(b) (2019), and the Court has been unable to find one. The relevant regulations do not define the term “reasonably foreseeable,” but nor are there any provisions that make exceptions to this regulatory term’s scope. 40 C.F.R. § 1508.8(b) (2019). Indeed, the Tenth Circuit has suggested that the term is intended to be applied broadly: in addressing an argument that “reasonably foreseeable” impacts are only those impacts which a proposed project intentionally causes, the Tenth Circuit has emphasized that “[a]gencies must evaluate all reasonably foreseeable project impacts regardless of whether they are intentional.” Utahns for Better Transp. v. U.S. Dep’t of Transp., 305 F.3d at 1175. Similarly, here, the Court concludes that the agencies must evaluate all reasonably foreseeable project impacts regardless whether the State imposes some additional permitting process that relates to that impact. See Sierra Club v. FERC, 867 F.3d 1357, 1375 (D.C. Cir. 2017)(“But even if we assume that power plants’ greenhouse-gas emissions will be subject to regulation in the

future, . . . the existence of permit requirements overseen by another federal agency or state permitting authority cannot substitute for a proper NEPA analysis.”). The Court concludes that -- given the discussion of the magnesium sludge pollutant in the Conceptual Feasibility Report -- the Processing Mill’s impacts to water quality is “reasonably foreseeable,” and thus agency has an obligation to consider and evaluate these impacts. 40 C.F.R. § 1508.8(b). See 40 C.F.R. § 1508.9(b) (2019). The existence of State-level permitting does not pardon the agency from its NEPA obligations, which include consideration of “the direct, indirect, and cumulative environmental impacts of the proposed action,” Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1034, and nor does the existence of State-level permitting render impacts not “reasonably foreseeable,” 40 C.F.R. § 1508.8(b) (2019). The agency’s obligation to consider reasonably foreseeable “direct, indirect, and cumulative environmental impacts of the proposed action,” exists regardless whether a State has limitations or regulations that also pertain to those environmental impacts. Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1034. See 40 C.F.R. §§ 1508.8(b); 1508.9(b) (2019).

This principle is not to say that an EA or an EIS should not reference or discuss State-level permitting requirements where applicable. Indeed, in some cases, discussion of such local permitting requirements might be “relevant information” that will “play a role” in the agency’s “decisionmaking process and the implementation of that decision.” Robertson v. Methow Valley Citizens Council, 490 U.S. at 349. For example, the Tenth Circuit has reasoned that an agency’s recognition in an EA that a project proponent must obtain local-level permits supports the fact that the agency took a hard look at reasonably foreseeable impacts. See Hillsdale Env’t Loss Prevention, Inc. v. U.S. Army Corps of Engineers, 702 F.3d at 1180 (“Because BNSF plans a number of mitigation and water-treatment measures and must obtain a KDHE construction permit

with requirements to reduce erosion and runoff, the Corps found adverse impacts during construction will be minor.”). Here, by contrast, the BLM made no such acknowledgement in the EA. Rather, that the Processing Mill will be subject to state- and local-level permitting is a post-hoc argument made by counsel that cannot substitute for the EA’s failure to describe, even cursorily, why the magnesium sludge would not significantly impact the environment. See Olenhouse v. Commodity Credit Corp., 42 F.3d 1560, 1575 (10th Cir. 1994). Again, here, there is nothing in the EA nor the Conceptual Feasibility Report that mentions the State-level permitting related to the Processing Mill’s water quality impacts. Arguments about this this particular State-level permitting arose after the litigation reached the United States District Court -- not during the agency’s decisionmaking process -- and thus these State-permit related arguments are impermissible “[a]fter-the-fact rationalization by counsel.” Olenhouse v. Commodity Credit Corp., 42 F.3d 1560, 1575 (10th Cir. 1994). The Plaintiffs noted at the hearing: “When I was listening to the company’s presentation talking about all the control measures they’re going to have, and everything is going to be protected, boy, I wish that was in the record. I wish the public had a chance to comment upon that.” Tr. at 47:16-20 (Flynn). The Federal Defendants’ argument, as the Court discusses above, is more fundamental: they argue that the existence of the State-permitting simply removes the impacts from the NEPA analysis’ scope. See Tr. at 17:24 (Boylan); id. at 64:5-8 (Boylan)(“That’s saying, if the sludge is added to groundwater [and] surface water would have that impact. But that’s not a reasonably foreseeable outcome given the permitting requirements.”). As the Court concludes above, this argument is not supported by the relevant law, which requires agencies to assess all the Mining Project’s reasonably foreseeable indirect impacts, regardless of presumed future compliance with State-level permitting requirements. See 40 C.F.R. §§ 1508.8(b); 1508.9(b) (2019); Sierra Club v. FERC, 867 F.3d at 1375. In conclusion,

as the Federal Defendants and American Magnesium's arguments to the contrary do not persuade the Court, the Court concludes that the BLM acted arbitrarily and capriciously in failing to take a hard look at the water quality impacts related to the Mining Project's Processing Mill.

3. The BLM's Analysis of the Environmental Impacts Related to the Ore's Transportation from the Mining Project Site to the Processing Mill is Adequate Under the NEPA.

Finally, the Court considers the Plaintiffs' argument that the BLM fails to consider the "impacts to the Deming communities that will bear the brunt of the ore hauling and industrial truck traffic." Plaintiffs' Brief at 29. This argument is the least developed of all the Plaintiffs' "hard look" contentions, Plaintiffs' Brief at 26-33, and the Court concludes that the EA contains sufficient environmental analysis about the indirect environmental impacts related to the ore's transportation from the Mining Project site to the conceptual Processing Mill facility. As the Federal Defendants note, see Federal Defendants' Brief at 16-17, the EA explicitly considers the ore's transportation as an "indirect effect[]" of the Mining Project, EA at 5 (AR 0000000021).

Accordingly, the EA discusses various environmental impacts related to the transportation of the ore, many of which receive "detailed analysis." EA at 6 (AR 0000000022). See EA at 30-33 (AR 0000000046-0000000048); id. at 42 (AR 0000000058); id. at 44 (AR 0000000060); id. at 48 (AR 0000000064); id. at 55 (0000000071); id. at 68-69 (AR 0000000084-0000000085). First, the EA discusses the existing conditions related to traffic and public safety, and assesses how the increased traffic related to the ore's transportation will affect traffic and public safety in the area. See EA at 30-33 (AR 0000000046-0000000048). On this score, the EA states: "Truck traffic would have indirect effects on the proposed route," EA at 32 (AR 0000000048), and, based on estimates of forty-six round trips per day between the Mining Project area and the conceptual mill site -- which amounts to an approximate "24,000 single trips per year," EA at 32 (AR 0000000048)

-- in conjunction with current traffic data on the relevant roads, the EA predicts that the proposed transportation route

would have a 24 percent increase in traffic each day due to the Proposed Action on County Road B016 and NM-331, between a 5 percent and 15 percent increase each day on NM-418, a 2 percent increase each day on South 8th Street, between a 1 percent and 3 percent increase each day on West Pine Street, and a 1 percent increase each day on North Gold Avenue.

EA at 32-33 (AR 0000000048-0000000049). The EA also predicts, based on crash data from the University of New Mexico's Traffic Research Unity 2018 Traffic Crash Maps for Luna County, see EA at 30 (AR 0000000046), the "potential for up to 10 additional collisions along the transportation route (one on County Road B016, three on NM-331, one on NM-481, four on West Pine Street, and one on North Gold Ave)," EA at 33 (AR 0000000049).

In addition, the EA discusses the impacts to air quality that will result from the ore's transportation, including the increases to PM₁₀ and PM_{2.5} related to the truck travel on both paved and unpaved portions of the transportation route. See EA at 42 (AR 0000000058); id. at 44 (0000000060). The EA also recognizes that the "[t]ransportation of dolomite for off-site milling will result in GHG emissions," EA at 46 (AR 0000000062), and that, based on an estimated "approximately 12,000 round trips per year along an approximately 27-mile route to the conceptual processing facility," the EA predicts that

Using EPA's Emission Factors for Greenhouse Gas Inventories (EPA 2014b[])] emission factors for diesel fuel and assuming an average fuel economy of 6 miles per hour (USEIA 2019), annual transport of dolomite would result in about 1,199 metric tons of CO₂e (CO₂, N₂O, and CH₄) each year for the 20-year life of the project.

AR 48 (AR 0000000064). The EA states, moreover, that, "[c]onsidered together, construction, operations, transportation and smelting would result in about 0.18 MMT CO₂e annually (construction occurring in year 1 only)." EA at 48 (AR 0000000064).

The EA also discusses the noise disturbance that would be caused by the transportation's truck noise. See EA at 55 (AR 0000000071). The EA states: "[T]he anticipated 46 round trips daily would result in intermittent increases to ambient noise conditions by one haul truck passing any given point on the transportation route approximately once every 6 minutes," "[n]oise from haul trucks would be more intrusive in areas that are characteristically quiet in the analysis area (generally 40 dBA)," and, in these areas, noise "would exceed the EPA's goal for exterior noise levels for residential land use of less than 55 dBA," but that "these noise-level increases would occur periodically and would not be sustained longer than the time it would take for a haul truck to drive by," EA at 55 (AR 0000000071). However, "[t]he increased noise from the transportation of ore in more populated areas closer to and in Deming would be less perceptible due to the higher levels of existing urban noise (generally 80 dBA)." EA at 55 (AR 0000000071). Finally, the EA also states that the ore's transportation from the Mining Project site to the Processing Mill would create fifteen new jobs in Luna County's transportation industry. See EA at 68-69 (AR 0000000084-0000000085).

The Court concludes that this analysis, which discusses various aspects related to the environmental impacts of the ore's transportation, is a sufficient "hard look" for NEPA purposes. The EA outlines the "reasonably foreseeable" indirect impacts related to the ore's transportation, 40 C.F.R. § 1508.8(b) (2019), and gives a more than adequate "brief discussion[]" identifying and evaluating those environmental impacts, 40 C.F.R. § 1508.9(b) (2019). The Plaintiffs' contention to the contrary is unpersuasive. See Plaintiffs' Brief at 29.

C. PURSUANT TO ITS ALLIED-SIGNAL ANALYSIS, THE COURT REMANDS, BUT DOES NOT VACATE, THE BLM'S ACTION.

Although the Tenth Circuit only recently adopted the Allied-Signal test as an analysis to determine the proper remedy in the event of a NEPA violation, see Diné Citizens Against Ruining Our Env't v. Haaland, 59 F.4th at 1025, the Court is no stranger to this analysis, which the Court has applied previously, see N. N.M. Stockman's Ass'n v. U.S. Fish & Wildlife Serv., 494 F. Supp. 3d 850, 1026-44 (D.N.M. 2020)(Browning, J.), aff'd, 30 F.4th 1210 (10th Cir. 2022). Under this test, “courts must consider two factors -- (1) ‘the seriousness of the [agency action’s] deficiencies (and thus the extent of doubt whether the agency chose correctly),’ and (2) ‘the disruptive consequences of an interim change that may itself be changed.’” Diné Citizens Against Ruining Our Env't v. Haaland, 59 F.4th at 1049 (quoting Allied-Signal, 988 F.2d at 151)(brackets in Diné Citizens Against Ruining Our Env't v. Haaland, but not in Allied-Signal). In essence, while vacatur is “‘a common, and often appropriate form’” of relief for a successful NEPA claim brought under the APA, Diné Citizens Against Ruining Our Env't v. Haaland, 59 F.4th at 1048 (quoting Diné Citizens Against Ruining Our Env't v. Bernhardt, 923 F.3d at 859), it is “not always the appropriate remedy for NEPA violations,” and thus analysis under Allied-Signal is necessary, Diné Citizens Against Ruining Our Env't v. Haaland, 59 F.4th at 1049. Under Allied-Signal, “[t]here is no rule requiring either the proponent or opponent of vacatur to prevail on both factors.” Shands Jacksonville Med. Ctr. v. Burwell, 139 F. Supp. 3d 240, 270 (D.D.C. 2015)(Moss, J.). The application of Allied-Signal is a “fact-intensive inquiry that is typically left to the discretion of the district court.” Diné Citizens Against Ruining Our Env't v. Haaland, 59 F.4th at 1049 (citing Black Warrior Riverkeeper, Inc. v. U.S. Army Corps of Engineers, 781 F.3d 1271, 1291 (11th Cir. 2015)).

1. The Deficiencies in the BLM’s Analysis Do Not Weight Heavily in Favor of Vacatur.

As the Court describes above, see Analysis Section II.B.2.b, supra, at 179-94, the BLM’s approval of the Mining Project is arbitrary and capricious in one respect: the BLM failed to take a “hard look” at the Processing Mill’s reasonably foreseeable impacts to water quality. Diné Citizens Against Ruining Our Env’t v. Haaland, 59 F.4th at 1034. When preparing the EA, the BLM had in its possession the Processing Mill’s Conceptual Feasibility Report, which describes a “process output” called “Magnesium Sludge.” Conceptual Feasibility Report at 62 (AR 0000004774). This waste, which the Conceptual Feasibility Report states has no control method and of which 2,300 tons are estimated to be produced annually, is “very hygroscopic,” and “will have a detrimental effect on surface water and underground aquifers increasing chloride, nitride and possibly toxic beryllium levels.” Conceptual Feasibility Report at 62-63 (AR 0000004774-0000004475). As discussed above, the EA’s discussion of this “reasonably foreseeable” Processing Mill environmental effect is inadequate under the NEPA. 40 C.F.R. § 1508.8(b) (2019); 40 C.F.R. § 1508.9(a)(2), (b) (2019). As the Court concludes above, this analytical inadequacy violates the NEPA’s “twin aims” of reasoned agency decision-making and the public’s opportunity to participate in that decision-making. Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc., 462 U.S. at 97. See Utah Shared Access All. v. U.S. Forest Serv., 288 F.3d at 1207 (noting that the “NEPA places upon federal agencies the obligation ‘to consider every significant aspect of the environmental impact of a proposed action,’” and “[i]t also ensures that an agency will inform the public that it has considered environmental concerns in its decision-making process” (quoting Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc., 462 U.S. at 97)).

Nevertheless, the Court concludes that, even taking into account this unlawful shortcoming, the BLM's ultimate decision is of the type which is "potentially lawful but insufficiently or inappropriately explained," and, in such circumstances, under the Allied-Signal test, "the court frequently remands for further explanation (including discussion of relevant factors and precedents) while withholding judgment on the lawfulness of the agency's proposed action." Radio-Television News Directors Ass'n v. F.C.C., 184 F.3d 872, 888 (D.C. Cir. 1999). Here, the BLM may be able to provide a reasonable explanation which concludes that the magnesium sludge pollutant will not alter the BLM's decision to approve the Mining Project. See Decision Record at 2-9 (AR 0000000115-0000000122). Under analogous circumstances, courts have concluded that "agencies should instead be 'afford[ed] a reasonable opportunity to . . . provide a reasoned explanation' of their choices." Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers, 282 F. Supp. 3d 91, 98 (D.D.C. 2017)(Boasberg, J.)(quoting Am. Radio Relay League, Inc. v. F.C.C., 524 F.3d 227, 242 (D.C. Cir. 2008))(brackets in Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers, but not in Am. Radio Relay League, Inc. v. F.C.C.). See Int'l Union, United Mine Workers of Am. v. Fed. Mine Safety & Health Admin., 920 F.2d 960, 966 (D.C. Cir. 1990)("We have commonly remanded without vacating an agency's rule or order where the failure lay in lack of reasoned decisionmaking."). Professor Ronald Levin's thorough and careful examination of judicial remedies in administrative law concludes that "remand without vacation may legitimately be applied, consistently with the APA, in a broadly discretionary fashion," and that

if the basis for remand is a gap in the agency's reasoning that the court finds troubling but thinks the agency may well be able to cure, or to ameliorate with minor changes in the rule or order, that perception tends to militate towards leaving the action in place while the agency addresses the deficiency.

Ronald M. Levin, “Vacation” at Sea: Judicial Remedies and Equitable Discretion in Administrative Law, 53 Duke L. J. 291, 379 (2003). On the other hand, “[i]f the remand rests on a more fundamental defect in the agency’s reasoning, the case for vacation of the action is much stronger.” Levin, supra, at 379.⁵⁴ Here, although the Court recognizes that there is, at times, “a fine line” between these categories, Radio-Television News Directors Ass’n v. F.C.C., 184 F.3d at 888, the Court nevertheless concludes that the NEPA-related shortcomings in the BLM’s decision-making in this case are of the sort that the BLM “may well be able to cure, or to ameliorate with minor changes in the rule or order.” Levin, supra, at 379. Stated differently, the Court concludes that the “extent of doubt whether the agency chose correctly” is minor, and thus the first prong of the Allied-Signal analysis weighs in favor of remand without vacatur. Allied-Signal, 988 F.2d at 151. Although the BLM must give careful consideration to the issues related to magnesium sludge and its potential to impact water quality, the agency “is well positioned to provide such explanation on remand,” and thus “[c]orrecting this flaw does not require that Defendants begin anew, but only that they better articulate their reasoning below.” Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers, 282 F. Supp. 3d at 98-99.

⁵⁴The United States Court of Appeals for the Eleventh Circuit also has found vacatur appropriate where an agency promulgated an administrative rule “with[out] the notice-and-comment procedures mandated by the APA,” and provided no explanation for not using those procedures. Alabama v. Centers for Medicare & Medicaid Servs., 674 F.3d 1241, 1244 (11th Cir. 2012). Another serious deficiency counseling vacatur is where the agency’s reasoning behind a rule is “flimsy, and [the agency’s] half-hearted attempt to defend its decision in this court is but another indication that [the rule] is a hopeless cause.” Fox Television Stations, Inc. v. FCC, 280 F.3d 1027, 1053 (D.C. Cir. 2002).

2. Allied-Signal's Second Prong Supports Remand Without Vacatur.

The Allied-Signal test's second prong asks courts to evaluate “the disruptive consequences of an interim change that may itself be changed.” Allied-Signal, 988 F.2d at 150-51 (quoting Int'l Union, United Mine Workers of Am. v. Fed. Mine Safety & Health Admin., 920 F.2d at 967). Put otherwise, the inquiry is “whether vacatur will lead to impermissibly disruptive consequences in the interim.” Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers, 282 F. Supp. 3d at 97. In circumstances in which the Allied-Signal test's first prong supports remand without vacatur, however, the United States Court of Appeals for the District of Columbia Circuit has observed that “the other factor to be considered under *Allied-Signal* . . . is only barely relevant.” Fox Television Stations, Inc. v. F.C.C., 280 F.3d 1027, 1049 (D.C. Cir. 2002). This approach makes sense, because, regardless of the disruptive -- or not-so-disruptive -- consequences of vacatur, “the probability that the [agency] will be able to justify [its decision] is sufficiently high that vacatur . . . is not appropriate.” Fox Television Stations, Inc. v. F.C.C., 280 F.3d at 1049 (citing U.S. Telecom Ass'n v. F.B.I., 276 F.3d 620, 627 (D.C. Cir. 2002)). This scenario is true in this case, in which the Court concludes that there is a sufficiently high probability that the BLM will be able to ameliorate the decision's deficiencies, making vacatur inappropriate.⁵⁵ To conclude, echoing the Honorable James Boasberg, United States District Judge for the District of Columbia, the Court cautions the BLM that, although it concludes that vacatur is not warranted in this case,

[t]hat determination does not, however, excuse Defendants from giving serious consideration to the error[] identified in this Court's . . . Opinion. Compliance with

⁵⁵The Court, having reached this conclusion on the record before it, therefore denies the Federal Defendants' and American Magnesium's requests for supplemental briefing on the remedy question. See Federal Defendants' Brief at 39; American Magnesium Brief at 20.

NEPA cannot be reduced to a bureaucratic formality, and the Court expects the [BLM] not to treat remand as an exercise in filling out the proper paperwork *post hoc*. After the agency's further work on remand, the parties may well disagree over the sufficiency of its conclusion. If and when such a dispute arises, they will again have the opportunity to address whether Defendants have in fact fulfilled their statutory obligations.

Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers, 282 F. Supp. 3d at 109.

III. THE BLM ADEQUATELY CONSIDERS ALTERNATIVES TO THE MINING PROJECT IN THE EA.

Next, the Plaintiffs argue that the BLM “failed to fully consider all reasonable alternatives, including the alternative of approving just the exploration project, instead of both exploration and full-scale mining at the same time.” Plaintiffs’ Brief at 33. The Federal Defendants respond that the EA fulfills its requirement “to include ‘brief discussions of . . . the environmental impacts of the proposed action and alternatives,’” Federal Defendants Brief at 24 (quoting 40 C.F.R. § 1508.9 (2019)), and also that the “Plaintiffs have offered no legal authority supporting the notion that an agency’s environmental analysis was flawed because it analyzed multiple phases in a single alternative,” Federal Defendants Brief at 25. The Court agrees with the Federal Defendants that the EA’s analysis of alternatives fulfills the BLM’s obligations under the NEPA.

The NEPA imposes on the federal government a duty to “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.” 42 U.S.C § 4332(2)(H). Moreover, as the quoted material above suggests, the CEQ’s regulations provide that an EA “[s]hall include brief discussions of . . . the proposed action and alternatives.” 40 C.F.R. § 1508.9 (2019). In the EIS context, the Tenth Circuit has stated that the analysis of alternatives is “characterized as ‘the heart’ of the environmental impact statement.” Colorado Env’t Coal. v. Dombeck, 185 F.3d at 1174 (quoting 40 C.F.R. § 1502.14 (1999)).

The concept of future-oriented “alternatives” is potentially extremely broad. The actual world, after all, is only one among many possible worlds, and there are theoretically many alternative futures that might await.⁵⁶ In the NEPA context, however, “[t]he range of reasonable alternatives ‘is not infinite.’” Biodiversity Conservation All. v. Jiron, 762 F.3d 1036, 1083 (10th Cir. 2014)(quoting Utahns for Better Transp. v. U.S. Dep’t of Transp., 305 F.3d at 1166). Reviewing courts employ a “rule of reason and practicality” to assess the agency’s consideration of alternatives. Airport Neighbors All., Inc. v. United States, 90 F.3d 426, 432 (10th Cir. 1996); BioDiversity Conservation All. v. Bureau of Land Mgmt., 608 F.3d 709, 714 (10th Cir. 2010)(“Our review of a decision not to consider a particular alternative is informed by a rule of reason and practicality.”). This “rule of reason and practicality” allows the agency to narrow the field of alternatives to consider by “eliminat[ing] alternatives that are ‘too remote, speculative, impractical, or ineffective,’ or that do not meet the purposes and needs of the project.” BioDiversity Conservation All. v. Bureau of Land Mgmt., 608 F.3d at 715 (quoting New Mexico ex rel. Richardson v. Bureau of Land Mgmt., 565 F.3d at 708). Under this standard, the “reasonableness

⁵⁶Contingent futures are philosophically slippery and have garnered the attention of thinkers since antiquity. Aristotle famously observed:

Everything must either be or not be, whether in the present or in the future, but it is not always possible to distinguish and state determinately which of these alternatives must necessarily come about.

Let me illustrate. A sea-battle must either take place to-morrow or not, but it is not necessary that it should take place to-morrow, neither is it necessary that it should not take place, yet it is necessary that it either should or should not take place to-morrow. Since propositions correspond with facts, it is evident that when in future events there is a real alternative, and a potentiality in contrary directions, the corresponding affirmation and denial have the same character.

Aristotle, De Interpretatione, Ch. 9, Aristotle in Twenty-Three Volumes, Harvard U. Press (1963).

of the alternatives considered is . . . judged with reference to an agency’s objectives for a particular project.” New Mexico ex rel. Richardson v. Bureau of Land Mgmt., 565 F.3d at 709. “The ‘rule of reason’ considers both the range of alternatives and the extent the agency discusses the selected alternatives.” Biodiversity Conservation All. v. Jiron, 762 F.3d 1036, 1083 (10th Cir. 2014). See Wyoming v. U.S. Dep’t of Agric., 661 F.3d 1209, 1244 (10th Cir. 2011)(“[O]nce an agency establishes the objective of the proposed action -- which it has considerable discretion to define . . . -- the agency need not provide a detailed study of alternatives that do not accomplish that purpose or objective, as those alternatives are not ‘reasonable.’”).

In this case, the Court concludes that the BLM’s discussion and analysis of alternatives in the EA comports with the “rule of reason and practicality.” Airport Neighbors All., Inc. v. United States, 90 F.3d at 432. In the EA, after discussing the Mining Project, the BLM notes that it has considered a “No Action Alternative,” which is “to deny the proposed Plan of Operations,” and thus compel American Magnesium to “pursue alternative methods for mining and extracting magnesium.” EA at 23 (AR 0000000039). Next, under the header of “Alternatives Considered but Not Analyzed Further,” the EA discusses “two other potential haul routes between the proposed mine location and the conceptual location of the Peru Industrial Park, before formulating the analysis.” EA at 23 (AR 0000000039). One of these potential routes was dismissed because it proposed traversing the Deming city center, which “would not be acceptable based on the volume of industrial traffic already traversing through the city center, and potential impacts on city businesses and safety of pedestrians from the increase in heavy truck traffic.” EA at 23 (AR 0000000039). The second potential route was dismissed “on the basis of the mileage of dirt roads that would be traversed, leading to a greater impact and increase in dust generated by haul traffic.” EA at 23 (AR 0000000039). The EA’s “Purpose and Need” statement reads:

The purpose of the proposed action is to implement the land use decisions to accomplish the goals and objectives, allowable uses, and management actions set out by the RMP⁵⁷ and the General Mining Law of 1872, as amended, while providing opportunity for the development of locatable magnesium resources on public lands.

The need for the proposed Federal action is the requirement that BLM respond to a proposed Plan of Operation to conduct mining operations on public lands pursuant to U.S. Mining Laws and in accordance with Federal regulations regarding mining operations found in 43 CFR 3809.

EA at 4 (AR 0000000020). With this “purpose and needs statement” in mind, and acknowledging that the BLM appropriately gave “substantial weight to the goals and objectives of [the] private actor,” the Court concludes that the EA’s discussion of alternatives to the Mining Project fulfills its obligations under the NEPA. Citizens’ Comm. to Save Our Canyons v. U.S. Forest Serv., 297

⁵⁷As the Court previously noted, “RMP” is “the 1993 Mimbres Resource Management Plan and Final Environmental Impact Statement.” FONSI at 1 (AR 0000000002). The BLM’s website describes this document as follows:

The Mimbres Resource Management Plan was prepared in 1993 to provide a comprehensive framework for managing public land and for allocating resources using principles of multiple use and sustained yield. This document formally records the Bureau of Land Management’s [sic] decisions for managing approximately 3 million surface acres of public land and 4.1 million subsurface acres in the Mimbres Resource Area. The Mimbres Resource Area encompassed BLM administered public land in Dona Ana, Luna, Hidalgo, and Grant counties in southwestern New Mexico. The Mimbres Resource Management Plan is the current resource plan for Dona Ana, Luna, Hidalgo, and Grant Counties in the Las Cruces District Office management area.

United States Department of the Interior, Bureau of Land Management, Mimbres Resource Management Plan, <https://eplanning.blm.gov/eplanning-ui/project/72801/510> (last visited August 2, 2024). See United States Department of the Interior, Bureau of Land Management, Las Cruces District Office Mimbres Resource Area, Mimbres Resource Management Plan (Dated December 1993), https://eplanning.blm.gov/public_projects/lup/72801/97036/117193/LCDO_-_1993_-_Mimbres_Resource_Area_RMP.pdf (last visited August 1, 2024)(“Mimbres RMP”). On mining specifically, the Mimbres RMP states that its policy is to “make mineral resources available in accordance with the objectives of the Mining and Minerals Policy Act of 1970 and the National Materials and Minerals Policy Research and Development Act of 1980.” Mimbres RMP at 2-3.

F.3d 1012, 1030 (10th Cir. 2002). The Mining Project’s purpose is relatively straightforward, and the Court does not impose on the BLM a requirement to survey a broad spectrum of variations -- e.g., the size of the project, alternative methods of mining -- that would also further the development of locatable magnesium resources. See Vermont Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc., 435 U.S. 519, 551 (1978)(“Common sense also teaches us that the ‘detailed statement of alternatives’ cannot be found wanting simply because the agency failed to include every alternative device and thought conceivable by the mind of man.”). The BLM considers the alternatives that were reasonable given the project’s purposes -- namely, approving the Mining Project and not approving the Mining Project -- and also considers, but does not further analyze, two transportation-related alternatives. See EA at 23 (AR 0000000039). The NEPA imposes no particular numerical amount of alternatives that must be considered to comply with the statute. See Native Ecosystems Council v. U.S. Forest Serv., 428 F.3d 1233, 1246 (9th Cir. 2005)(“To the extent that Native Ecosystems is complaining that having only two final alternatives -- no action and a preferred alternative -- violates the regulatory scheme, a plain reading of the regulations dooms that argument.”). Given the Mining Project’s scope and purpose, the Court applies the “rule of reason and practicality” to conclude that the BLM’s discussion of alternatives in the EA is not arbitrary and capricious, and complies with the NEPA. Airport Neighbors All., Inc. v. United States, 90 F.3d at 432.

The Plaintiffs’ main argument against this conclusion does not persuade the Court otherwise. As the Court notes above, the Plaintiffs contend that the BLM erred by not considering the alternative of “approving just the exploration project, instead of both exploration and full-scale mining at the same time.” Plaintiffs’ Brief at 33. The BLM, in Appendix D to the EA, explains that the “NEPA does not require that exploration activities be analyzed separately from proposed

mining activities,” EA Public Comment and Response Summary and Matrix, Appendix D to the EA at 15 (AR 0000008501), and therefore rejects the Plaintiffs’ proposed alternative, see Draft EA Comments Letter at 25 (AR 0000008511)(arguing that “the Draft EA failed to consider reasonable alternatives, including: (1) allowing only exploration; (2) approving only one phase at a time”). The Court concludes that the BLM’s reasoning in declining to consider exploration-only as a discussed alternative in the EA complies with the rule of reason and practicality. See BioDiversity Conservation All. v. Bureau of Land Mgmt., 608 F.3d at 714. The BLM provides a plausible reason for limiting its range of alternatives, and was within its discretion in defining Mining Project’s objectives in such a way that did not necessitate consideration of the exploration-only alternative. See Wyoming v. U.S. Dep’t of Agric., 661 F.3d at 1244. The BLM’s treatment of alternatives in the EA complies with the NEPA.

IV. THE BLM PROVIDES ADEQUATE BASELINE CONDITIONS FOR AIR QUALITY AND MIGRATORY BIRD NESTING IN THE EA.

As a final argument under the NEPA, the Plaintiffs contend that the BLM acted in an arbitrary and capricious manner when it “failed to fully analyze baseline conditions for the critical water, air, wildlife, and other resources that will be adversely affected” by the Mining Project. Plaintiffs’ Brief at 35. Although the Plaintiffs initially frame this argument broadly, the Plaintiffs’ Brief specifies only two areas in which the BLM allegedly fails to analyze the baseline conditions: (i) “Criteria Pollutants under the federal Clean Air Act such as CO, VOCs, Ozone, SO₂, NO_x”; and (ii) migratory bird nesting in the Mining Project area. Plaintiffs’ Brief at 36.⁵⁸ The Federal

⁵⁸In their Reply, the Plaintiffs add a new argument related to baseline conditions: that the EA does not adequately provide the baseline conditions of the surface water and underground aquifers, which the Plaintiffs contend is important because the Magnesium Process Residue “will have a detrimental effect on surface and underground aquifers increasing pH and ammonia

Defendants argue that the EA's discussion of the baseline conditions of these pollutants and wildlife resources is sufficient. See Federal Defendants' Brief at 27-31.

The Court concludes that the EA's discussion of baseline conditions related to air quality and migratory bird nesting is sufficient to comply with the NEPA's requirements. In the Tenth Circuit, the necessity of assessing "baseline conditions" is closely related to the necessity of discussing a "no-action alternative": "NEPA analysis uses a no-action alternative as a baseline for measuring the effects of the proposed action." Biodiversity Conservation All. v. U.S. Forest Serv., 765 F.3d 1264, 1269 (10th Cir. 2014)(citing 40 C.F.R. § 1502.14 (2014)(requiring that the agency assess a no-action alternative)). See Ctr. for Biological Diversity v. U.S. Dep't of the Interior, 72 F.4th 1166, 1186 (10th Cir. 2023). Stated differently, in accordance with the purpose of discussing a no-action alternative, a NEPA document must provide sufficient information regarding baseline conditions such that potential environmental impacts for the proposed project can be meaningfully gaged. Baseline conditions are important insofar as they provide a point of comparison against

levels,"" and the Magnesium Sludge "will have a detrimental effect on surface water and underground aquifers increasing chloride, nitride and possibly toxic beryllium levels." Plaintiffs' Reply (quoting Conceptual Feasibility Report at 63 (AR 0000004775)). Consistent with the Federal Rules of Federal Appellate Procedure -- which govern the Court's review of agency action, see Olenhouse v. Commodity Credit Corp., 42 F.3d at 1580 -- and Tenth Circuit case law, see Silverton Snowmobile Club v. U.S. Forest Serv., 433 F.3d 772, 783 (10th Cir. 2006), the Court will not address this new argument regarding baseline conditions. As the Tenth Circuit explains, an argument raised for the first time in a reply brief "waives that issue." Silverton Snowmobile Club v. U.S. Forest Serv., 433 F.3d at 783 (10th Cir. 2006)(quoting Anderson v. U.S. Dep't of Lab., 422 F.3d 1155, 1174 (10th Cir. 2005)). This general rule is based, in part, on due process concerns for the appellee, as a new argument in a reply brief "robs the appellee of the opportunity to demonstrate that the record does not support an appellant's factual assertions and to present an analysis of the pertinent legal precedent that may compel a contrary result." Stump v. Gates, 211 F.3d 527, 533 (10th Cir. 2000)(citing Headrick v. Rockwell Int'l Corp., 24 F.3d 1272, 1278 (10th Cir. 1994)(White, J., retired Justice sitting by designation)). Moreover, to the extent that this rule is discretionary, the Court concludes that it will not exercise its discretion to consider this newly raised argument.

which environmental effects can be evaluated. See W. Watersheds Project v. Bureau of Land Mgmt., 721 F.3d at 1275.

Here, the EA provides sufficient information regarding baseline air quality and migratory bird nesting to comply with the NEPA. As for air quality, the EA provides significant detail regarding the baseline conditions in the analysis area. The EA's discussion begins generally, explaining Luna County's elevation, "arid continental climate with low humidity," and average rainfall. EA at 38 (0000000054). Next, the EA describes that the area is in attainment of the National Ambient Air Quality Standards: "[a]reas that are in attainment of the NAAQS are categorized as either Class I, Class II, or Class III, which determines the increment of air quality deterioration allowed," and, for the Mining Project Area, "[t]he Luna County analysis area is in attainment for the NAAQS, and the NMAAQs and is categorized as a Class II area." EA at 38 (AR 0000000054). The EA also states that, according to a separate national air quality metric -- the Air Quality Index (AQI) -- "AQI values for Luna County were mainly in the good range . . . with 96% of the days having an AQI in that range." EA at 39 (AR 0000000055). The EA also provides a table that gives the amount of days -- over a ten-year period -- which exceeded an AQI level of over 100 (which indicates the air is "unhealthy for sensitive groups"). EA 39 (AR 0000000055). At a more specific granular level, the EA also states the "[t]otal human-caused emissions within the analysis area," reporting the baseline conditions for NO_x, CO, VOCs, PM₁₀, PM_{2.5}, and SO₂, measured in tons per year. EA at 39 (AR 0000000055). The Court concludes that this information -- which, contrary to the Plaintiffs' contentions, provides the baseline level of the "[t]otal human-caused emissions within the analysis area," EA at 39 (AR 0000000055) -- is an adequate discussion of baseline conditions under the NEPA. These measurements provide a workable and functional point of comparison by which the BLM can assess the potential

environmental effect of the Mining Project as it relates to air quality. See W. Watersheds Project v. Bureau of Land Mgmt., 721 F.3d at 1275.

As for baseline conditions related to migratory bird nesting in the Mining Project area, the EA states at the outset that the Mining Project is “not likely to have direct impacts to migratory birds with the potential to occur within the proposed project,” EA at 8 (AR 0000000024), and accordingly impacts to migratory birds is an issue that is “not analyzed in further detail in the EA,” EA at 6 (0000000022). The BLM reaches this decision on the basis of “[g]eneral biological surveys” that were conducted in the Mining Project Area during 2016 and 2018. EA at 7 (AR 0000000023). According to these surveys, there were no “special-status species within the proposed project area,” and, during these surveys, “[t]here were no state or federally listed species observed.” EA at 7 (AR 0000000023). The Court concludes that this discussion provides a reasonable rationale for the EA’s level-of-analysis related to potential environmental effects on migratory bird species. On some level, the fact that no migratory bird nests were found on the Mining Project site during the surveys provides a baseline of sorts. In addition, the BLM determined, based on the ecological data before it, that impacts to migratory birds did not need to be “analyzed in further detail in the EA.” EA at 6 (0000000022). The Court cannot fault the BLM for these conclusions, which are “based on data and studies it deemed reliable.” WildEarth Guardians v. Conner, 920 F.3d 1245, 1260 (10th Cir. 2019). Thus, contrary to the Plaintiffs’ assertions, the EA’s analysis does not rest solely on “future mitigation measures.” Plaintiffs’ Brief at 36-37. The Court’s review of the record shows that the BLM made a reasoned evaluation of how the Mining Project will affect migratory bird nesting in the project area. See WildEarth Guardians v. Conner, 920 F.3d at 1260-61.

V. THE BLM’S SIMULTANEOUS APPROVAL OF INITIAL EXPLORATION AND A FULL MINE DOES NOT VIOLATE THE FLPMA.

Next, the Plaintiffs argue that the BLM’s decision to authorize exploration and mining at the same time is “contrary to BLM mining policy under FLPMA.” Plaintiffs’ Brief at 38. The Plaintiffs’ argument is based on overlapping statutory and regulatory contentions. First, the Plaintiffs point to the FLPMA’s statutory requirement that, “[i]n managing the public lands the Secretary shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands.” 43 U.S.C. § 1732(b). See Min. Pol’y Ctr. v. Norton, 292 F. Supp. 2d 30, 42 (D.D.C. 2003)(Kennedy, J.) (“FLPMA, by its plain terms, vests the Secretary of the Interior with the authority -- and indeed the obligation -- to disapprove of an otherwise permissible mining operation because the operation, though necessary for mining, would unduly harm or degrade the public land.”). This obligation, the Plaintiffs contend, is mirrored in the BLM’s mining regulations, which state that the BLM may “disapprove[]” or “withhold[] approval of” a plan to develop mineral resources on public lands if that plan “[p]roposes operations that would result in unnecessary or undue degradation of public lands.” 43 C.F.R. § 3809.411(d)(3)(iii). More specifically, the BLM regulations provide a “performance standard,” which states that a prospective mining plan of operations “must avoid unnecessary impacts and facilitate reclamation by following a reasonable and customary mineral exploration, development, mining and reclamation sequence.” 43 C.F.R. § 3809.420(a)(2). Nested below the regulations, the Plaintiffs cite to the BLM’s Surface Management Handbook ¶ 5.2.2, at 93 -- which the Plaintiffs describe as a “policy mandate,” Plaintiffs’ Brief at 39 -- which offers the following example of a mining project that does not follow a “reasonable and customary” mineral exploration, development, mining and reclamation sequence: “For example, an operation that

proposes stripping soil from an area for mining purposes prior to even attempting to identify the presence of a mineral deposit using standard industry practices would not meet this performance standard.” Surface Management Handbook ¶ 5.2.2, at 93. On the basis of these authorities, the Plaintiffs state that the BLM in this case violates its FLPMA obligation to “prevent unnecessary or undue degradation of the lands,” 43 U.S.C. § 1732(b), by approving a sequencing plan that runs afoul of 43 C.F.R. § 3809.420(a)(2)’s direction that a mining project “must avoid unnecessary impacts and facilitate reclamation by following a reasonable and customary mineral exploration, development, mining and reclamation sequence,” 43 C.F.R. § 3809.420(a)(2). See Plaintiffs’ Brief at 38-39.

The Federal Defendants respond by first attacking a central premise of the Plaintiffs’ argument, namely, that the Surface Management Handbook creates a binding obligation on the BLM: “To the extent that Plaintiffs rely on BLM’s policy guidance to bolster their argument, such reliance is ineffectual. Internal policy documents provide a practical guide to BLM’s implementation of the surface management regulations, and do not create specific legal requirements.” Federal Defendants’ Brief at 31 n.9. Citing Ninth Circuit cases, the Federal Defendants assert that “[c]ourts ‘review an agency’s alleged noncompliance with an agency pronouncement only if that pronouncement actually has the force and effect of law,’” Federal Defendants’ Brief at 31 n.9 (quoting Ctr. for Cmty. Action & Env’t Just. v. Fed. Aviation Admin., 18 F.4th 592, 600 (9th Cir. 2021)), and that, in this case, “[t]he BLM handbook cited by Plaintiffs is not legally binding because BLM has not purported to be bound by it and because it was neither promulgated through notice and comment procedures nor published in the Federal Register or the Code of Federal Regulations,” Federal Defendants’ Brief at 31 n.9. Accordingly, the Federal Defendants urge the Court to focus on the relevant regulations -- the “Part 3809 regulations” --

and argue that those regulations “do not preclude BLM from approving an MPO that includes both exploration and extractive mining.” Federal Defendants’ Brief at 31. Focusing in particular on 43 C.F.R. § 3809.420(a)(2)’s language that requires operators to “avoid unnecessary impacts and facilitate reclamation by following a reasonable and customary mineral exploration, development, mining and reclamation sequence,” 43 C.F.R. § 3809.420(a)(2), the Federal Defendants state that the Plaintiffs “mischaracterize” this regulation, and that the regulation “does not require that BLM review and approve exploration and mining in a single project separately,” and does not impose a “one-size-fits-all approach mandating that exploration be completed before BLM can consider and approve an MPO for mine development and extraction.” Federal Defendants’ Brief at 32. Rather, in the Federal Defendants’ view, the question is context-specific: “[A] ‘reasonable and customary mineral exploration, development, mining and reclamation sequence’ under section 3809.420(a)(2) depends on the nature of the proposed operations and mineral deposit.” Federal Defendants’ Brief at 33 (quoting 43 C.F.R. § 3809.420(a)(2)). “What might be ‘reasonable and customary’ for one type of deposit may differ from another type of deposit.” Federal Defendants’ Brief at 33 (quoting 43 C.F.R. § 3809.420(a)(2)).

The Court concludes that the BLM did not violate the FLPMA by approving the Mining Project’s exploration phase and full mining phase simultaneously. First, in assessing the parties’ disagreement over the meaning of 43 C.F.R. § 3809.420(a)(2), the Court agrees with the Federal Defendants that the regulation does not proscribe the simultaneous approval of resource verification and full mining, and thus such approval does not, on its own, run afoul of the FLPMA’s obligation to “prevent unnecessary or undue degradation of the lands.” 43 U.S.C. § 1732(b). Moreover, although the Court reaches the same regulatory-interpretation conclusion on this question as the Federal Defendants, the Court also concludes that -- on this issue -- 43 C.F.R.

§ 3809.420(a)(2) is not ambiguous and thus the Court does not defer to the BLM’s interpretation of the regulation under Auer. See Kisor v. Wilkie, 588 U.S. 558, 575 (2019). Following from this conclusion, the Court next concludes that the BLM’s decision simultaneously to approve resource verification and mining is entitled to a “presumption of validity,” Kobach v. U.S. Election Assistance Comm’n, 772 F.3d at 1197, which is especially strong in this case, because questions regarding the reasonableness of mining sequencing “involve technical or scientific matters within the agency’s area of expertise,” Utah Env’t Cong. v. Russell, 518 F.3d at 824. The Court elaborates on these conclusions below, before addressing -- and disagreeing with -- the Plaintiffs’ other related contentions.

First, the Court considers the parties’ competing interpretations of 43 C.F.R. § 3809.420(a)(2). To interpret this regulation, the Court looks to “the traditional tools of construction, such as the regulatory ‘text, structure, history, and purpose.’” Sierra Club v. United States Env’t Prot. Agency, 964 F.3d 882, 891 (10th Cir. 2020)(quoting Kisor v. Wilkie, 588 U.S. at 559). As for text, the Court notes that 43 C.F.R. § 3809.420(a)(2)’s plain text does not require the BLM to approve mining sequencing that follows any particular order or process, but requires only that the sequencing is “reasonable and customary”:

The following performance standards apply to your notice or plan of operations:

(a) ***General performance standards --***

. . . .

- (2) ***Sequence of operations.*** You must avoid unnecessary impacts and facilitate reclamation by following a reasonable and customary mineral exploration, development, mining and reclamation sequence.

43 C.F.R. § 3809.420 (emphasis in regulation). As for questions regarding the regulations' history and purpose, the Federal Defendants note that, when proposing this regulation, the BLM explained:

Proposed paragraph (a)(2) would require operators to avoid unnecessary impacts by following a reasonable and customary mineral exploration, development, mining, and reclamation sequence. This provision would expand on the “unnecessary” part of the existing definition of “unnecessary or undue degradation.” There have been past instances where operators have created unnecessary impacts by not following a reasonable and customary sequence. This requirement would prevent activity from being conducted that was substantially out of sequence with reasonable and customary mineral development practices, resulting in unnecessary impacts. We intend that this performance standard would be applied on a large scale as it relates to sequencing. For example, we do not intend it to be used to regulate the precise number of drill holes needed to define an ore deposit, or the size of a leach pad or waste rock disposal area. We intend it to be applied in those extreme cases where an operator intends to construct extensive access, infrastructure systems, or initiate mining, without having first done any exploration activity to determine whether a mineral deposit is present.

Proposed Rule, Mining Claims Under the General Mining Laws; Surface Management, 64 Fed. Reg. 6422-01, 6436 (February 9, 1999)(“Proposed Rule”). As this explanation indicates, this provision generally applies in “extreme cases” in which an operator seeks to commence an extensive mining project “without having first done any exploration activity to determine whether a mineral deposit is present.” Proposed Rule at 6436. Moreover, in the BLM’s general comments to the final rule adopting 43 C.F.R. § 3809.420(a)(2), the BLM states:

Some commenters were concerned that BLM did not have the authority to, or should not require, operators to follow a “reasonable and customary mineral, exploration, development, mining and reclamation sequence.” In BLM’s experience, there have been instances in the past where operators have created unnecessary impacts by not following a reasonable and customary mineral development sequence. Therefore we believe regulating sequencing may be necessary to prevent unnecessary or undue degradation. BLM will review sequencing on a large scale and will not regulate the sequencing of small portions of an operation.

Final Rule, Mining Claims Under the General Mining Laws; Surface Management, 65 Fed. Reg. 69998-01, 70052-53 (source of quoted material not cited, but presumably 43 C.F.R. § 3809.420(a)(2)). After considering carefully the regulation's text, history, and purpose, the Court concludes that with respect to the question before the Court -- whether 43 C.F.R. § 3809.420(a)(2) requires the BLM to obtain evidence as to the nature and extent of a mineral deposit before approving full mineral extraction, see Plaintiffs' Brief at 39 -- the regulation is not ambiguous: 43 C.F.R. § 3809.420(a)(2) does not require a specific sequence that applies in all scenarios, i.e., something like, "exploration before, but not simultaneous to, full mining," but only that the agency follow a "reasonable and customary" sequencing that avoids "unnecessary impacts and facilitate[s] reclamation." 43 C.F.R. § 3809.420(a)(2).⁵⁹

⁵⁹The Court's conclusion that 43 C.F.R. § 3809.420(a)(2) is not ambiguous on this question precludes Auer or Seminole Rock deference to the agency's interpretation of the regulation. Although neither party in this case discusses whether the Court should apply deference to the BLM's interpretation of 43 C.F.R. § 3809.420(a)(2), the Court concludes that the regulation is not "genuinely ambiguous" on the issue of simultaneous approval, and thus the regulation "just means what it means -- and the court must give it effect, as the court would any law." Kisor v. Wilkie, 588 U.S. 558, 575 (2019). See id. (noting that, "the core theory of Auer deference is that sometimes the law runs out, and policy-laden choice is what is left over," but "if the law gives an answer -- if there is only one reasonable construction of a regulation -- then a court has no business deferring to any other reading, no matter how much the agency insists it would make more sense"). This conclusion, however, is of limited consequence here, because the Court reaches the same conclusion on the meaning of the regulation that the Federal Defendants hold, namely, that 43 C.F.R. § 3809.420(a)(2) does not "requir[e] BLM to approve mining only after it has approved exploration," and "a 'reasonable and customary mineral exploration, development, mining and reclamation sequence' under section 3809.420(a)(2) depends on the nature of the proposed operations and mineral deposit." Federal Defendants' Brief at 32-33 (quoting 43 C.F.R. § 3809.420(a)(2)). Moreover, the Court is wary of the staying power of Auer deference following Loper Bright, in which the Supreme Court "places a tombstone on Chevron no one can miss." 144 S. Ct. at 2275 (Gorsuch, J., concurring). Although the Supreme Court did not overrule or alter Auer deference in Loper Bright, and the Supreme Court declined to overrule Auer just five years ago, see Kisor v. Wilkie, 588 U.S. at 563, the basic principles that purport to underlie Auer and -- formerly -- Chevron deference are conceptually similar in that both involve administrative law's judicial deference to agency interpretations of law, and thus both are susceptible to constitutional

In this case, the BLM determined that American Magnesium’s plan of operations involves “reasonable and customary” sequencing, and that determination is entitled to a “presumption of validity,” Kobach v. U.S. Election Assistance Comm’n, 772 F.3d at 1197, which is especially strong here given that questions regarding the reasonableness of mining sequencing “involve technical or scientific matters within the agency’s area of expertise,” Utah Env’t Cong. v. Russell, 518 F.3d at 824. Based on the Court’s review of the record, this situation is not an “extreme case[]” in which American Magnesium seeks to commence an extensive mining project “without having first done any exploration activity to determine whether a mineral deposit is present.” Proposed Rule at 6436. Rather, the record indicates that American Magnesium presented to the BLM significant evidence that mineral deposits are present at the proposed Mining Project site, from 1957 studies regarding “high-magnesium Fusselman Dolomite in the Florida Mountains,” to “[g]eologic mapping” which indicates the presence of magnesium dolomite and exposed outcrops of the high-magnesium dolomite at the Mining Project site. Final PO at 34-36 (AR 0000005678-0000005680). As BLM acknowledged during the public comment period, the “FLPMA prohibits anyone using the public lands from causing ‘unnecessary or undue degradation’ (UUD). The decision record must explain how the selected alternative (the approved PoO) meets the requirements of the regulations to prevent UUD. (BLM Handbook 3809-1).” EA Public Comment and Response Summary and Matrix, Appendix D to the EA at 15 (AR 0000008501). The BLM notes, however, that the PO and the EA meet these regulations:

Section 2.1.4 of the EA includes a description of the resource verification process that would be followed during Phases 1 and 2 of the proposed mining

criticisms. In any event, the Court has made no secret of its skepticism of Auer deference in the past, see Mohon v. Agentra LLC, 400 F. Supp. 3d 1189, 1218-24 (D.N.M. 2019)(Browning, J.), and would welcome a standard more in line with basic separation-of-powers principles.

operation. Section 2.1.5 of the EA explains that mining would occur during Phases 1-3 depending on resource verification results. 43 CFR 3809.420(2) states that an operator must “avoid unnecessary impacts and facilitate reclamation by following a reasonable and customary mineral exploration, development, mining, and reclamation sequence.” The concept of sequencing is also explained in BLM Handbook H-3809-1, Section 5.2.2. Neither the regulations nor the handbook preclude a PoO from including multiple steps in one plan as is described in EA Chapter 2.

The Surface Management regulations (43 CFR 3809) require operators to follow a reasonable and customary mineral exploration, development, mining, and reclamation sequence. The existence of the magnesium deposit is based on surface outcrop. The operator is pursuing approval of a plan that includes resource confirmation drilling. According to American Magnesium, the drilling is necessary to satisfy investor requirements, not BLM requirements. As explained above, proving discovery is not a prerequisite to plan approval. If the confirmation drilling does not support the economics of mining the deposit, then the risk of having pursued a plan approval is born out by American Magnesium.

EA Public Comment and Response Summary and Matrix, Appendix D to the EA at 17-18 (AR 0000008503-0000008504). The Court concludes that this explanation of the Mining Project’s sequencing, as the BLM approved in the EA, is reasonable and comports with 43 C.F.R. § 3809.420(a)(2) and the FLPMA’s requirement that “[i]n managing the public lands the Secretary shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands.” 43 U.S.C. § 1732(b).

The Court disagrees with the Plaintiffs’ arguments to the contrary. First, the Court agrees with the Federal Defendants -- and the Ninth Circuit cases that the Federal Defendants quote -- that the BLM’s Surface Management Handbook does not impose legal obligations on the agency, but, rather, “[i]nternal policy documents provide a practical guide to BLM’s implementation of the surface management regulations.” Federal Defendants’ Brief at 31 n.9. See Ctr. for Cmty. Action & Env’t Just. v. Fed. Aviation Admin., 18 F.4th at 600. This principle also accords with statements from the Tenth Circuit: “Unlike legislative rules, policy statements ‘do[] not establish a binding

norm’ -- or in other words, do not have the force and effect of law.” Jake’s Fireworks Inc. v. Acosta, 893 F.3d 1248, 1262 (10th Cir. 2018)(quoting Am. Min. Cong. v. Marshall, 671 F.2d 1251, 1263 (10th Cir. 1982))(brackets in Jake’s Fireworks Inc. v. Acosta, but not in Am. Min. Cong. v. Marshall). Moreover, even if the Surface Management Handbook imposes legal obligations on the BLM, the Court concludes that the BLM’s approval of the American Magnesium’s PO does not conflict with the policy advice in the Surface Management Handbook. The Surface Management Handbook states, in a manner similar to 43 C.F.R. § 3809.420(a)(2): “The operator must avoid unnecessary impacts and facilitate reclamation by following a reasonable and customary mineral exploration, development, mining, and reclamation sequence.” Surface Management Handbook ¶ 5.2.2, at 93. The Surface Management Handbook explains: “This performance standard is designed to prevent unnecessary impacts from operations that are conducted out of sequence with the reasonable and customary mineral exploration, development, mining, and reclamation cycle,” and offers as an example that “an operation that proposes stripping soil from an area for mining purposes prior to even attempting to identify the presence of a mineral deposit using standard industry practices would not meet this performance standard.” Surface Management Handbook ¶ 5.2.2, at 93. Again, in this case, the PO indicates that American Magnesium “attempt[s] to identify the presence of a mineral deposit using standard industry practices,” Surface Management Handbook ¶ 5.2.2, at 93, namely, using significant evidence that mineral deposits are present at the proposed Mining Project site from 1957 studies regarding “high-magnesium Fusselman Dolomite in the Florida Mountains,” “[g]eologic mapping” that indicates the presence of magnesium dolomite, and exposed outcrops of the high-magnesium dolomite at the Mining Project site. Final PO at 34-36 (AR 0000005678-0000005680). Accordingly, even if

Surface Management Handbook imposes a legal requirement on the BLM regarding sequencing, the BLM's actions in this case do not run afoul of that obligation.

In addition, the Plaintiffs argue that, related to sequencing, “[t]he requirement that approved operations are limited to the appropriate stage of development is also part of the congressional restriction that BLM can only approve ‘reasonably incident’ operations under the 1955 Surface Resources Act, 30 U.S.C. § 612(a), as well as the FLPMA prohibition against ‘unnecessary or undue degradation (UUD).’” Plaintiffs’ Brief at 40. The Plaintiffs quote the Surface Management Handbook, which states:

Under the Surface Resources Act of 1955, mining claims may not be used “for any purposes other than prospecting, mining or processing operations and uses reasonably incident thereto.” Any activity that is not reasonably incident as defined in 43 CFR 3715.0-5 is by definition UUD within the meaning of 43 CFR 3809.5.

Surface Management Handbook ¶ 5.1.2, at 92. The term Surface Management Handbook and regulations define “reasonably incident,” in turn, “in part as, ‘using methods, structures, and equipment appropriate to the geological terrain, mineral deposit, and stage of development.’” Surface Management Handbook ¶ 5.2.2, at 93 (quoting 43 C.F.R. § 3715.0-5)). See Plaintiffs’ Brief at 40 (quoting Surface Management Handbook ¶ 5.2.2, emphasizing “stage of development”). In short, the Plaintiffs argue that the BLM cannot approve the exploration and the full mine at the same time, because to do so would be to approve an operation that is not “reasonably incident” to a “prospecting, mining or processing operation[.]” 30 U.S.C. § 612(a).

The Court concludes that 30 U.S.C. § 612(a)’s “reasonably incident” requirement does not render the BLM’s actions in this case unlawful under the Surface Resources Act of 1955, 30 U.S.C. §§ 601-615, or the FLPMA. As the Federal Defendants note, the Surface Resources Act’s purpose is to “prevent ‘abuses under the general mining laws by those persons who locate[d] mining claims

on public lands for purposes other than that of legitimate mining activity.” Federal Defendants’ Brief at 34 (quoting Bohmker v. Oregon, 903 F.3d 1029, 1035 (9th Cir. 2018))(brackets in Federal Defendants’ Brief, not in Bohmker v. Oregon). The Court concludes that the Surface Resources Act’s limitations do not support the Plaintiffs’ contention that the BLM in this case violated its FLPMA obligation to “prevent unnecessary or undue degradation of the lands,” 43 U.S.C. § 1732(b), by approving the PO’s sequencing plan. The Court concludes that the exploration -- and the sequencing related to the exploration -- is “reasonably incident” to a “prospecting, mining or processing operation[]” under the Surface Resources Act of 1955. 30 U.S.C. § 612(a).

Last, the Plaintiffs argue that, because the PO and the EA “underst[an]d that exploration [is] separate from the mining and that mining [is] contingent upon the exploration results,” and that “[m]ining is also depending on the construction of the mill,” the BLM violates its FLPMA obligation by approving the American Magnesium PO. Plaintiffs’ Brief at 41-42. They state that these acknowledgements indicate that “[r]equiring that exploration and mineral metrification be completed first . . . is certainly feasible in this case, and would inform any decision whether to approve full-scale mining.” Plaintiffs’ Brief at 42. The Court does not agree with the Plaintiffs that these facts render the BLM’s approval of the Mining Project’s PO violative of the FLPMA. As discussed previously, the Court concludes that there is no requirement -- under the FLPMA or the relevant regulations -- that the Mining Project plans follow a specific sequence which applies in all scenarios, but only that the mining plan follow a “reasonable and customary” sequence which avoids “unnecessary impacts and facilitate[s] reclamation.” 43 C.F.R. § 3809.420(a)(2). Whether the BLM “feasibly” could have approved a more limited plan is not the relevant inquiry in determining whether the BLM violated the FLPMA. Here, as the Court concludes above, American Magnesium’s plan of operations involves a “reasonable and customary” sequencing

given the specific facts and circumstances related to the Mining Project, and that sequencing does not run afoul of the BLM's statutory obligation to prevent unnecessary or undue degradation of the lands. See 43 U.S.C. § 1732(b).

VI. THE BLM'S APPROVAL OF THE MINING PROJECT, GIVEN THE LEVEL OF DETAIL ABOUT THE PROCESSING MILL, DOES NOT VIOLATE THE FLPMA.

Last, the Plaintiffs again make an argument premised on an alleged lack of details regarding the Mining Project's related Processing Mill. In an argument with echoes of the Plaintiffs' first argument under the NEPA, the Plaintiffs contend that the BLM violated the FLPMA by failing to obtain "critical details" about the Processing Mill before approving the Mining Project, thereby neglecting the BLM's statutory obligation to prevent unnecessary or undue degradation of the lands. Plaintiffs' Brief at 43-44. See 43 U.S.C. § 1732(b). The Plaintiffs anchor this FLPMA argument in: (i) an alleged "obligation under FLPMA to obtain this critical information and conduct a detailed analysis of the full Project's impacts," Plaintiffs' Brief at 44 (citing Island Mountain Protectors, Nat'l Wildlife Fed'n, Assiniboine & Gros Ventre Tribes, & Fort Belknap Cmty. Council, GFS(MIN) 71(1998)(May 29, 1998)(Interior Bd. Of Land Appeals)); and (ii) a BLM regulation that requires mining operators to include -- in their plan of operations -- information about "processing" and "support" facilities, Plaintiffs' Brief at 43 (quoting 43 C.F.R. § 3809.401(b)(2)). The Federal Defendants counter that 43 C.F.R. § 3809.401(b)(2) "does not specify the level of detail regarding processing facilities that an operator must include in an MPO," and the

BLM, thus, has considerable discretion in determining the level of detail required to determine that an MPO is complete by meeting the content requirements in 43 C.F.R. § 3809.401(b), and can tailor the level of detail required to enable it to determine whether the project would prevent unnecessary or undue degradation.

Federal Defendants’ Brief at 36. The Federal Defendants argue that, here, the BLM “obtained sufficient information from American Magnesium to determine that the MPO would not result in unnecessary or undue degradation.” Federal Defendants’ Brief at 35. Moreover, the Federal Defendants contend that the FLPMA’s obligations -- unlike the NEPA’s obligations -- do not extend to private lands, and because the Processing Mill is to be located on private lands, “the mill does not factor into BLM’s analysis of unnecessary or undue degradation.” Federal Defendants’ Brief at 36.

The Court concludes that the Federal Defendants are correct that the FLPMA’s obligation “to prevent unnecessary or undue degradation of the lands,” 43 U.S.C. § 1732(b), refers to “public lands,” 43 U.S.C. § 1732(b); *id.* (“In managing the public lands, the Secretary shall . . .”), which are defined as “any land and interest in land owned by the United States within the several States and administered by the Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership,” 43 U.S.C. § 1702(e). *See id.* (excluding from this definition “lands located on the Outer Continental Shelf,” and “lands held for the benefit of Indians, Aleuts, and Eskimos”). Accordingly, because the Plaintiffs’ argument is based on an alleged failure to prevent unnecessary or undue degradation of the private land on which the Processing Mill will sit, that argument fails as a matter of plain statutory text. Moreover, the only case that the Plaintiffs cite in support of their proposition -- a nonprecedential administrative appeal -- supports the Court’s conclusion on this statutory question. The case states that “[l]ands held in trust for the benefit of Indians, however, are not ‘public lands’ under the statute . . . [and, c]onsequently, many of the matters Appellants identify as off-site impacts are not germane.” Island Mountain Protectors, Nat’l Wildlife Fed’n, Assiniboine & Gros Ventre Tribes, & Fort

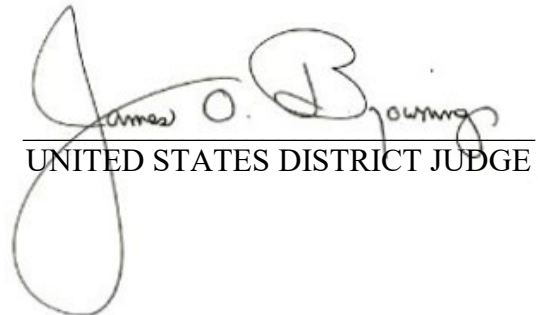
Belknap Cmty. Council, GFS(MIN) 71(1998)(May 29, 1998)(Interior Bd. Of Land Appeals)(citing 43 U.S.C. § 1702(e)).

In addition, the Court concludes that, to the extent that information about the Processing Mill is relevant to preventing unnecessary or undue degradation on the BLM land on which the Mining Project will take place, the BLM complies with 43 C.F.R. § 3809.401(b)(2)'s informational requirements, because American Magnesium provides “a level of detail sufficient for BLM to determine that the plan of operations prevents unnecessary or undue degradation.” 43 C.F.R. § 3809.401(b). In accordance with 43 C.F.R. § 3809.401(b)(2)(i), American Magnesium's Final PO includes a map of the Mining Project area in relation to the site of the proposed Processing Mill, including a proposed access route. See Final PO at Fig. 1 (AR 0000005733). In accordance with 43 C.F.R. § 3809.401(b)(2)(ii), American Magnesium supplied the BLM with its Conceptual Feasibility Study. See Letter from David Tognoni to Bill Childress, Re: American Magnesium Application for Plan of Operations Approval; NMNM 136678; 3809 (L0310); American Magnesium's Response to the Bureau of Land Management's Letter Dated December 8, 2017 at 6 (dated March 1, 2018)(AR 0000004598). By approving the Final PO, the BLM determines that this level of detail regarding the Processing Mill is “sufficient for BLM to determine that the plan of operations prevents unnecessary or undue degradation.” 43 C.F.R. § 3809.401(b). The Court affords this determination a “presumption of validity,” Kobach v. U.S. Election Assistance Comm'n, 772 F.3d at 1197, which is strong in this instance, because the level of detail required for the agency to assess unnecessary or undue degradation “involve[s] technical or scientific matters within the agency's area of expertise,” Utah Env't Cong. v. Russell, 518 F.3d at 824. Accordingly, the Court concludes that the BLM does not violate the FLPMA by failing to require greater detail regarding the Mining Project's Processing Mill.

In sum, for the reasons described in the Memorandum Opinion and Order, the Court concludes that: (i) the Plaintiffs have standing to pursue their claims; (ii) the BLM: (a) has taken the NEPA-mandated hard look at the Processing Mill's reasonably foreseeable air quality impacts, (b) has taken the NEPA-mandated hard look at the Processing Mill's reasonably foreseeable water quantity impacts, (c) has not taken the NEPA-mandated hard look at the Processing Mill's water quality impacts, and (d) has taken the NEPA-mandated hard look at the reasonably foreseeable environmental impacts related to the magnesium ore transportation from the Mining Project site to the Processing Mill; (iii) the BLM has not violated the NEPA in its discussion of reasonable alternatives, because the BLM adequately considers the alternatives that are reasonable given the project's purposes; (iv) the BLM did not violate the NEPA in its discussion of baseline conditions, because the BLM, in its environmental assessment, provides sufficient information regarding baseline air quality and migratory bird nesting to comply with the NEPA; (v) the BLM did not violate the FLPMA by approving the Mining Project's exploration phase and full mining phase simultaneously, because American Magnesium's plan of operations involved reasonable and customary sequencing given the specific facts and circumstances related to the Mining Project, and that sequencing does not run afoul of the BLM's FLPMA-imposed obligation to prevent unnecessary or undue degradation of the lands; and (vi) the BLM did not violate the FLPMA by approving the Mining Project given the level of detail known about the Processing Mill, because the BLM's FLPMA obligations do not extend to the private land on which the Processing Mill will sit, and, even if the BLM's FLPMA obligations did extend to the private land on which the Processing Mill will sit, the BLM has complied with the relevant regulations' informational requirements. Owing to the nature of the BLM's NEPA violation, the Court -- under Allied-Signal analysis that the Tenth Circuit mandates, see Diné Citizens Against Ruining Our Env't v. Haaland,

59 F.4th at 1048 -- concludes that equitable considerations in this case warrant a remand without vacatur in this case.

IT IS ORDERED that: (i) the American Magnesium Foothill Dolomite Mine Project Environmental Assessment (dated July 2020)(AR 0000000014-0000000099), and Finding of No Significant Impact (dated July 21, 2020)(AR 0000000002-0000000013), are remanded to the Bureau of Land Management Las Cruces District Office to remedy the Environmental Assessment's inadequate indirect impacts analysis related to the Processing Mill's water quality impacts; (ii) the American Magnesium Foothill Dolomite Mine Project, Decision Record, Document No. DOI-BLM-NM-L000-2020-0024-EA (dated May 2021, signed May 11, 2021)(AR 0000000114-0000000124), is not vacated; and (iii) the Court will enter a separate Final Judgment closing this case.



UNITED STATES DISTRICT JUDGE

Counsel:

Roger Flynn,
Western Mining Action Project
Lyons, Colorado

-- and --

Sally A. Paez
New Mexico Wilderness Alliance
Santa Fe, New Mexico

-- and --

Samantha M. Ruscavage-Barz
WildEarth Guardians

Santa Fe, New Mexico

Attorneys for the Plaintiffs

Todd S. Kim

Assistant Attorney General for the Environment and Natural Resources Division

Shannon Boylan

Leilani Doktor

Trial Attorneys

Natural Resources Section

United States Department of Justice, Environment & Natural Resources Division

Washington, D.C.

-- and --

Andrew A. Smith

Senior Trial Attorney

Natural Resources Section

United States Department of Justice, Environment & Natural Resources Division

Albuquerque, New Mexico

Attorneys for the Defendants

Pete Domenici, Jr.

Lorraine Hollingsworth

Domenici Law Firm, P.C.

Albuquerque, New Mexico

Attorneys for the Defendant-Intervenor